

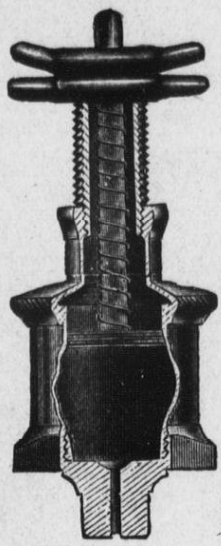
The United States MILLER

AND THE MILLING ENGINEER.

Fifteenth Year.—No. 7.

MILWAUKEE, JULY, 1890.

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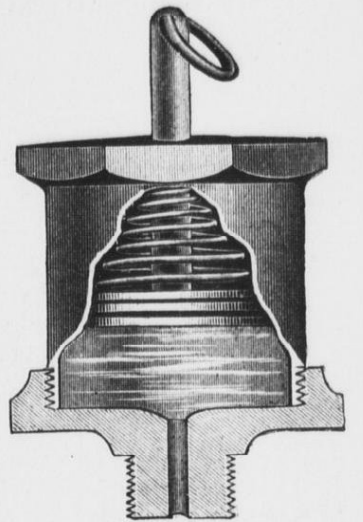
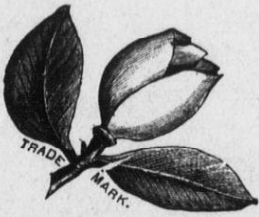
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Is now ready for delivery. Price Ten Dollars. It is the most complete of any we have ever published, and possesses many new and valuable features. Send in your orders *now*.

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Waterloo N. Y., June 11, 1890.

RICHMOND MFG. CO., Lockport, N. Y.

Gentlemen—Your draft presented and paid to-day. Permit us to say that your new improved Grain Separator is the best machine that we have ever seen. It works to a charm, and we are pleased to so report.

With best wishes, we remain, yours truly,

SWEET, MONGIN & COOK.

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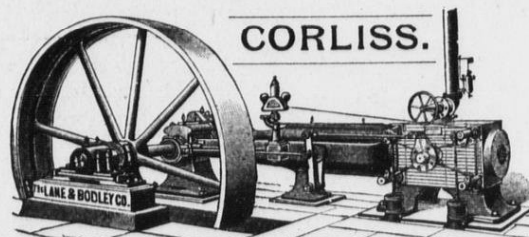
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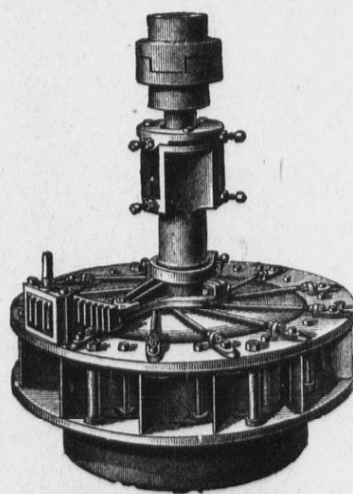
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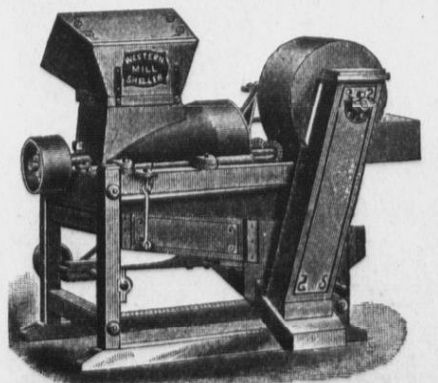
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RELIANCE WORKS,

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Gray's Noiseless Belt Roller Mill.	<p>Known and recognized as the Standard the world over. More than 35,000 pairs of Rolls in use in Gray frames. More in use in Minneapolis than all others combined. The original Solid Iron Frame and Noiseless Belt Drive. The best adjusting devices. The best Shaker feeder. All the latest improvements.</p> <p>Don't buy inferior machines because they are cheap.</p>
Gray's Improved Centrifugal Reel.	<p>Perfect separations, great capacity, light running, handsome design, fine finish. All driving connections and oil holes outside of frame. Inside of reel free from complicated gears, tipping buckets and other abominations. A perfect combination of simplicity, strength and durability. It costs little, if any, more than poorer ones. Put it in your mill, and it will win your friendship.</p>
Gray's Patent Flour Dresser.	<p>Used in ALL of our mills for the last 3 years, and the first word of complaint is yet to be heard. 8 ft. machine does the work of old style 16 ft. or 18 ft. reel, does it better, does it with less power, and takes up less room. Guaranteed to be unequaled by any similar machine, and will speak for itself, if you give it a chance. Sold at reasonable prices, and payment not expected if it does not do as well as any other flour dresser. If it does better, you will soon find it out.</p>
The Reliance Purifier.	<p>"We consider the Reliance Purifier the best purifier in the market at the present time."—WASHBURN-CROSBY Co., Minneapolis, Minn.</p> <p>"We never saw anything better."—LA GRANGE MILLS, Red Wing, Minn.</p>
The Reliance Sieve Scalper.	<p>This is a machine with which we wish our customers to become well acquainted. It has all the essential qualities of a perfect machine—perfect separations, immense capacity, almost runs itself, takes little room, and will improve the results in any mill. One machine will handle one break in a 1000 bbl. or five breaks in a 200 bbl. spring wheat mill, and just as perfect work on winter wheat. We use them in all our latest mills, large and small, and no machine we have ever brought out was better received by millers. If you are using the old style scalpings, it will pay to investigate this.</p>
The Beall Corrugation.	<p>By special arrangement with Messrs. Frank Beall & Co., we are the only mill furnishing establishment in the country authorized to equip mills with this corrugation. It is used and endorsed by many of the largest and best known mills in all sections, and possesses features of undoubted excellence that commend it strongly to experienced millers. Specially adapted to the first, second and third breaks. Circulars, testimonials and full particulars on application.</p>
Complete Mills of Any Capacity.	<p>Our facilities are without doubt the largest, experience the most extensive, machines the best and most favorably known, record the most uniformly successful, and consequently our work is the most reliable. Building a mill is a venture that takes money, and it pays in the end to trade with a reliable establishment that furnishes only work of the best quality, offers none but reasonable guarantees, and has the means to make its guarantees good. Prices little, if any, higher than you have to pay for inferior work, results are certain, no experimenting at purchaser's expense.</p>

MACHINES IN STOCK FOR PROMPT SHIPMENT.

CATALOGUES, PRICES AND ESTIMATES ON APPLICATION.

The United States MILLER

AND THE MILLING ENGINEER.

Fifteenth Year.—No. 7.

MILWAUKEE, JULY, 1890.

Subscription Price, \$1.00 Per Year.

(From Our Regular Correspondent.)

OUR BUFFALO LETTER.

THE convention is over. President A. R. James in his new crown of glory is resplendent with honor thrust upon him, and the Merchants' Exchange is proud both of the man and the distinction of having one of Buffalo's citizens chosen from among so many bright men to fill this exalted office. Clear headed, shrewd and sound in theories, with a maternally inherent pertinacity rarely met with in these days, he is just the man to propose and to push reforms so much needed in this country.

And yet we are sorry that he has been elected by the millers, for the Buffalo Merchants' Exchange never needed a guiding hand as much as it does now, and it is feared that with the many duties which the new office imposes upon him he will not have time to take the helm in the next race for the president of the Merchants' Exchange. Of course there are those who oppose the idea and are not friendly to this "wide-awake-shake-your-bones" Yankee, but they are mainly found on the "floor of the Exchange" and not where the greatest strength of this institution lies, viz: outside of the grain men. The boys who are not favorable to Mr. James must concede his popularity with the so-called "outsiders." No man has ever been able to bring the crowd of solid business men on the floor that he has; a call from James always means something to the members who make their appearance only on occasions when necessity demands it. How quickly would the Exchange go to pieces without such conservative men as Messrs. Urban, Eames, James, Sandrock, Newhall, Ex-Mayor Becker, Meadows, Matthews and Guthrie. Threats to "split" the Exchange are even now being heard over a matter of changing the by-laws. "Progress," "Rusticuss" and "Busticuss" have had their say in the daily papers. If the gentlemen could only know how silly this airing of their opinions sounds to outsiders; what boys it makes them appear in the eyes of sensible thinking people who read the stuff and watch the petty squabbling continually going on in that institution of trade, they would act more like business men and not like a lot of old washerwomen. The reforms in the Merchants' Exchange have caused a great many heart burnings—and no reform yet.

Flour has dropped 25 cents and in some cases 30 cents per barrel, but for no other reason than competition was pressing too hard and stocks were a little heavy. Quotations from the Northwest, however, for certain brands were all the way from 10 to 20 cents higher than the same flour would be furnished here for and so heavy orders were left with us before the advance wheat on July 7th. Prices were then put back 25 cents when, in fact, 50 cents would have been the correct figure as millers were sailing on rock bottom during the low price period. The figures sent east are, for patent Spring 5.50@5.65, and for winter 4.65@4.75. Millfeed which was weak showed great strength this week, and some speculation in future delivery is indulged in. Coarse winter bran sold spot at 13.00 this week.

Mr. J. F. Schoellkopf, of the firm of Schoellkopf & Mathews, met with a ser-

ious accident June 22nd. While going down stairs at his sheep skin tannery his foot slipped and he fell upon his right knee, breaking the knee cap. From last accounts he will not be out of bed for the next two months. To such a bristling, enterprising old gentleman as Mr. Schoellkopf every hour spent in bed must seem a week.

The Canal Forwarding Association is booming along, but the managers found it necessary to reduce rates to meet the rail cut. Wheat is now 3½, corn 3¼ to New York. Boats are being taken care of better than ever, and from the way several of the heavy weights are swelling around there is money in the combine. Take Mr. Joseph Hadcock for example. He toils not with the gay and cankered canal boat captain as of yore, but to see him spin through the Board of Trade building in his lavender colored dude pumps, cuff-encumbered hands, a miller's suit and a sprightly yellow necktie emblazoned with a stud of unusual proportions—well Solomon in all his rigging must have been lusterless—a five million incandescent compared with a tallow dip. He is the "Pooh Bah" of the company—does all the work without being asked and receives no thanks.

The whole "biling" lot of canal forwarders are now in the Association. Tom Regan, who I predict will come around in time, dropped in to settle and is now taking his little pot of porrage with the rest of them. Tom is credited with having a power of foresight.

Another good Democratic vote has been lost to Buffalo. Mr. Frederick Truscott, of the firm of Truscott & Heathfield, has moved to Lake View, just outside the city limits, where he has purchased a small farm. He already talks knowingly of shaking down potatoes, digging apples and picking pnmppkins. His partner, Heathfield, has become so enchanted with the prospects of the farm that he thinks seriously of taking a section in the same vicinity and raising mud. Mr. George Urban, Jr., always willing to help the struggling, has offered the firm his gas well. "You can cut it up in lengths," he told them, "and sell it for post holes to the farmers, you know. There is money in it; you can get it out; I couldn't." It is believed on 'change that the firm would have succeeded in working off a few thousand feet if the purchase had been made, as they have never yet been left in a deal.

Horace H. Eldred, who has been in jail here for nearly three months awaiting trial on the charge of embezzlement while manager of the Attica Mills, has finally been bailed out in the sum of \$4,000. Two civil charges were also brought against him and bail to the amount of \$900 was pledged.

All reports from the millers who attended the convention agree (and you can bet the delegates from every section were pumped dry by our boys on the crop subject) that wheat never looked nor promised better. The only fault came from certain millers who lament the prospects of there being no No. 3 wheat. Like the old woman, George Urban tells about who had the finest crop of potatoes ever raised on the farm, but found fault because there would be no little potatoes for the pigs.

The application of E. B. Wilber for reinstatement as a member of the Merchants' Exchange came up at the last meeting of the trustees, and eleven members of the board voted in favor of his admission. This may be all right, but in the opinion of those who have the interests of the Exchange most at heart, the action is considered uncalled for and unwise. Mr. Wilber's transactions, for which he was expelled, allow of but one construction between business men. Sympathy and business are antagonistic. Whenever that combination is tried sympathy always winds up business.

Clint Newman's reformers are responsible for this, also for several other new and illusionary schemes. The latest is to place the freight bureau, weighmaster, inspector and book-keeper under one head, viz.: that of Wm. Thurstone, secretary of the Exchange. Another straw will break the old man's back now, what will become of him with this whole bale to carry.

Reformer Newman was not at the convention, notwithstanding Mr. Urban's earnest solicitation to attend. "You see," said Mr. Urban, when his anxiety regarding Mr. Newman's intentions became the talk of the board, "Clint keeps the boys so straight when he is along that I would rather not go without him, and am therefore willing to pay his expenses for the pleasure of seeing the boys behave themselves."

Apropos: A well known lumber dealer to whom Clint was relating some of the "inside facts" of a journey in which he took part, hit the phonographic propensity of the little gentleman a severe blow when he told him in all frankness: "Mr. Newman, I would like to travel with you, it would be so comforting to think of returning home after having been out with a party of which you were a member." This was taken as a compliment.

In the matter of Schoellkopf & Mathews and A. R. James, against A. P. Wright & Son, which has been put off until the September term of the Superior court you can put the case down as settled. The Wrights will be let down easy—that is as gently as men of honor like Matthews and James can permit, without having the impression go abroad that they were in the wrong.

Mr. Joseph Bork, of this city, who recently purchased the Attica Mills, has had the deeds made out in the name of his son, Charles, and the latter will manage this rather unlucky piece of property. The young man has no knowledge of milling, but as the great Joe Bork virtually owns half the Polish settlement in Buffalo and controls the other half, an outlet for all the mill can make of the grades used by that class will easily be found. The same young Bork is showing the old man's tricks already, for he closed with George Urban's second miller a few days after he came in possession of the mill. He knew where to look for a good head miller, more power to the young cub, and may the rollers of the Attica Mills never cease revolving as long as he has charge, is the wish of Attica whose citizens have long suffered under such makeshifts as Eldred & Co.

But a few words of advice from one who has been in the business before, will not be out of place here. A country mill to be run successfully must have the confi-

dence of the citizens of the town in which it is situated, especially of one the size of Attica. A little of the work, such as printing, advertising, cooperage and many other little jobs can be done in Attica as well as in Buffalo. Buffalo is not the only city in the United States.

The wheat crop in this country promises to be one of the finest on record, and by the way, is of great importance locally this year. For years past the Newman Brothers, of Akron, have had a monopoly of the wheat crop in this section. The town of Clarence has been one of their best stamping grounds, and from which the celebrated "Akron Falls" brand of flour has been made. It is beyond doubt the best wheat raised in New York state. But this glory is now about to depart from the Newmans. Mr. George Urban, of the Banner Milling Co., and Messrs. Harvey & Henry, it is said, have men on the grounds contracting for the crop. This is giving "Clint" a great deal of trouble, and he can expect a lively tussle unless a compromise is arranged. Buffalo will have three new elevators for the fall trade. The Wheeler is covered, the new Exchange well forward, and the "City C." advanced above the first story. This will give additional capacity of fully 2,000,000 bushels.

The trouble among the grain scoopers was short. The Union has determined to root out all the weak members and do away with the pernicious system of rebates, especially, it is claimed, the Dakota. This paying of rebates is one of the black spots on our elevator system, and it is hoped that the Union will be aided by our fair minded receivers in its struggle against this dishonest practice.

The old story about large mills in the Northwest seeking new fields either in Buffalo or its vicinity has been revived. You could not drive the Washburn Mills to this point with a club, although a better spot for just such a scheme never existed.

Mr. Joseph Henry, of the firm of Harvey & Henry, is held responsible for the terrible "stink" which filled the Exchange building and the lower part of the city. "Joe" furnished the capital for bringing the rotten wheat in the burned propeller, Chenango, from Erie to this port. Then his interest with the stuff ended, but it took some tall hustling on his part to get this interest out whole, as the undertaking was far from a profitable one. BUFFALO.

July 14, 1890.

WATERVILLE, Washington, wants a flour mill. No opposition to contend with. Address for full information, Lucien E. Kellogg, Waterville, Douglas Co., Wash.

THE 600-bbl. mill of McLaughlin & Moore, Toronto, Canada, is being extensively overhauled and latest improvements adopted throughout, among which are 19 of the Moore Sieve Scalpers and Graders, 19 double set of 9x30 Moore Rolls, 31 of the Jonathan Mills Universal Air-belt Purifiers, 4 Jonathan Mills Universal Flour Dressers. They are also putting in an upright Compound Condensing Engine. The mill is to be arranged to mill both spring and winter wheat, and they expect to make it one of the finest mills in America. They will use none of their old machinery.

OFFICE OF

Superlative Purifier Manufacturing Company.

MILWAUKEE, WIS., June 2d, 1890.

TO THE MILLING PUBLIC:

Our attention has recently been called to a circular having on the front page a cut of our New Era Scalper, with a description of its operation, showing the advantages derived from the use of the sieve scalper. We cannot but feel flattered that what has been considered a reputable Mill Furnishing House should have published an article on the merits of the New Era Scalper, although giving it a new name. The parties must have secured one of the New Era Scalpers to have copied it so closely. They have not, however, taken out a license for manufacturing our machine. We cannot see why they should try to impose on the milling public by offering our Scalper for sale without a license. They must know that the New Era Scalper is broadly covered by patents Nos. 420,802; 420,803; 420,723 and 423,258, granted to Mr. A. Hunter.

While we do not wish to appear in the light of bulldozers, we at the same time believe that we have rights in this matter, which should be respected, and hereby notify millers that we will hold them responsible for damages for using any Scalper copied after the New Era, or any Scalper that infringes any of the claims of the above patents.

MILLERS TAKE WARNING! Do not be made the victims of designing manufacturers, who, through their cupidity, would involve you in a Patent Law Suit. If you purchase Scalpers from us or our authorized agents, bearing our name and the title of the machine, New Era Scalper, with numbers of patents, you will not buy a Law Suit, as ours was the first Sieve Scalper placed on the market. All others are merely base imitations.

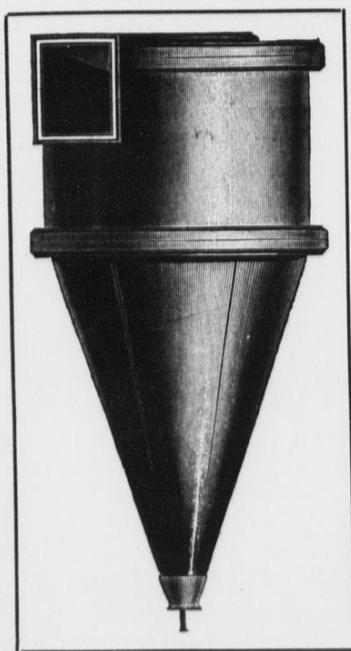
Respectfully,

SUPERLATIVE PURIFIER MFG. CO.

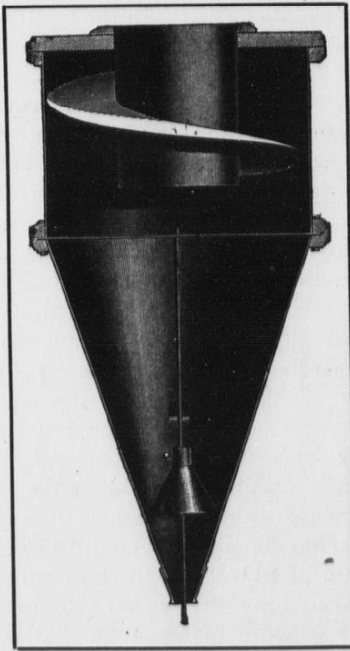
MILWAUKEE, - - WISCONSIN.

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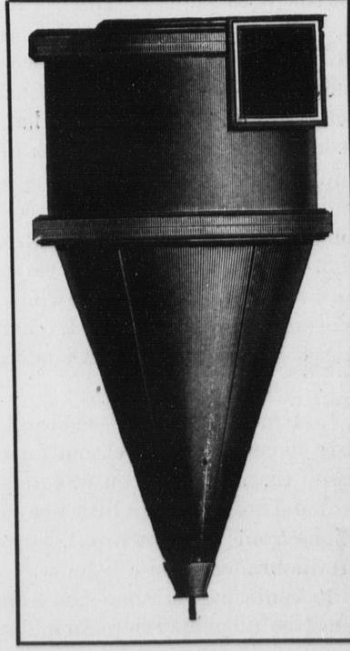
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Purifiers, Grain Cleaners, and all dust producing machines.



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COLLECTOR, AND
GUARANTEE
EVERY USER AND
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AGAINST ANY
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THE WORK OF
THIS MACHINE IS
GUARANTEED,
AND WE
WILL ALLOW
ANYONE TO TEST
IT THOROUGHLY
BEFORE
PAYING FOR IT.



No royalty has been collected on any Collector of our manufacture. We challenge anyone to name an instance.

Millers wanting a thoroughly reliable Dust Collector at LOW PRICES, address

VORTEX DUST COLLECTOR CO.

MILWAUKEE, - - WISCONSIN.

UNITED STATES MILLER
AND THE MILLING ENGINEER.

E. HARRISON CAWKER, EDITOR.

PUBLISHED MONTHLY.

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For estimates for advertising, address the UNITED STATES MILLER AND THE MILLING ENGINEER.

[Entered at the Post Office at Milwaukee, Wis., as mail matter of the second-class.]

MILWAUKEE, JULY, 1890.

We respectfully request our readers when they write to persons or firms advertising in this paper, to mention that their advertisement was seen in the UNITED STATES MILLER AND THE MILLING ENGINEER. You will thereby oblige not only this paper, but the advertisers.

WE send out a number of SAMPLE COPIES of each issue. We solicit a critical examination of our Journal and invite you to subscribe. The price is one dollar per year. No premiums—no discount.

IT looks as if a Little matter had hoodooed *The Millstone*.

THE J. B. Alfree Co., of Indianapolis, Ind., are about to place some new machinery on the market. Particulars next month.

SHIPMENTS of flour from Minneapolis from January 1st to July 17 aggregate 3,183,148 barrels, against 2,660,384 for the corresponding period last year.

THE Michigan State Millers Association will hold a meeting at Lansing, Mich., July 22d. A fine programme is arranged for the occasion, and a large attendance is expected.

THE Smith Company of Jackson, Mich., has been re-organized through the exertions of Messrs. Eldred and Emerson, and placed before the milling public as ready for business.

THE Kentucky Court of Appeals recently decided that a loser in a bucket-shop transaction has the same right to recover given by the law to a loser in any other gambling transaction.

J. W. THROOP, Esq. sailed for Europe July 9. He expressed himself as greatly pleased with the interest manifested in his Victoria Purifier, and Smith's Germ Flour Bread. The bread we can testify to as being excellent.

WE take pleasure in informing our readers that we have about completed arrangements for a regular monthly letter from New Zealand, and we have no doubt but it will be an interesting feature. We hope to publish the first of the series in our August number.

THE N. Y. Produce Exchange is no doubt a worthy and powerful body, but we deny that it is exclusively able to dictate what kind of a bill of lading the millers of the United States should be bound to accept. Co-operation in securing something better than we now have is to be desired.

THE pending tariff bill proposes to put a duty on barley of 25 cents per bushel. This would be prohibitive. Strong efforts are being made to have it left as it now is, 10 cents. Should the 25-cent rate be established it will destroy the business of many maltsters on or near the Canadian boundary line.

IN answer to many inquiries we desire to say that "Cawker's American Flour Mill and Grain Elevator Directory" is of great value to all merchant millers, for it furnishes the names and address of flour brokers, wholesale flour dealers, prominent bakers, and dealers in grain and mill-stuffs. It is a key to all departments of the trade, and is reliable.

NOT only members of the Millers National Association but millers in general will read with interest the article in this number of the UNITED STATES MILLER, written and signed by S. H. Seamans, Esq., in relation to the false and malicious so-called "History of the Millers' National Association" published in *The Millstone*. Further comment is unnecessary.

THERE is one thing that American farmers and millers should work on harmoniously and that is to thoroughly introduce our corn (maize) and products thereof in all parts of Europe. If the masses of Europe once really ascertain the good qualities of our corn and its products the demand would soon be very great for this important American cereal.

THE Consolidated Roller Mill Co., have brought action against Frank Arnold of Sauk Rapids, Minn., for infringement of fifth claim of John Stevens' patent No. 228,001. The claim is as follows:

"The process of reducing grain to flour, consisting of passing it through a series of sets of rolls graded in respect to fineness of dress, and through bolts intermediate between each set and the succeeding set of rolls."

HON. GEO. BAIN, whom every miller knows, has good reason to feel proud. At the recent Commencement of the St. Louis University his son Walter H. Bain graduated with high honors, and the degree of A. M. was conferred upon his namesake, Geo. G. Bain. We congratulate the young men on their well-earned laurels and G. B. Sr. on his good fortune in possessing two such energetic and intelligent sons.

RANCK'S "History of the Millers National Association," circulated in pamphlet form at the Minneapolis Convention, and published in *The Millstone* turns out to be more of a boomerang than a history. Such is the fate of all things not founded on truth. We hardly believe that Ranck is the author of this bogus and libellous effusion, but he seems to claim it as his own and must therefore stand the criticism evoked.

A LITTLE less than 50 per cent. of exports of wheat and its product was shipped in the shape of flour, and exports of the two commodities combined were larger in the past twelve months than for either of the preceding two years, but not so large as for the twelve months ending June 30, 1887, and again in 1888. We never before exported as much corn as during the past year (100,905,494 bushels), although we came pretty close to the last year's shipments in 1879-80, the quantity then exported aggregating 99,572,329 bushels. In 1888-89 we exported less than 70,000,000 bushels, and in 1887-88 only 25,320,869 bushels.

THE events of the past few months in the railroad world have made it quite evident that the tendency is towards consolidation. At the present time over one-half the mileage of the country is virtually controlled by about twenty-five companies, and further deals like the one by which the San Francisco and St. Louis has just been added to the Atchison system are to be expected in due time. Ultimately it would seem as though the entire field will be possessed by twenty or thirty of the larger companies, with a corresponding reduction in the number of managing officials, and big salaries.

A peculiar case was discovered recently in the New Orleans Stock Exchange. Like the Exchanges in many other cities, it has a co-operative attachment; under its constitution the life insurance rights of a stockholder follow the stock. A member died and the usual assessment was collected as was supposed for the benefit of his representatives. But it turned out that

the stock had been pledged and the pledgee by virtue of a power of attorney had sold it, though the transfer had not been made on the books. The result was that insurance money supposed to be contributed for the family of a deceased member had to be paid over to a stranger, whose name did not even appear on the stock register.

THE Millers National Association met in Minneapolis as announced, and elsewhere our readers will find a digest of the proceedings. As all the members know, and as all outsiders should know, most of the effective practical work is done by committees and the officials of the Association. The Association is working harmoniously and certain results desired will doubtless be obtained. The officers and chairmen and members of committees are all experienced business men and men of responsibility and integrity, and we believe they know how to work for the best interests of millers. We trust that all their actions may tend to the advancement of the milling industry in the United States.

IT has been pretty conclusively shown that we have altogether too many flouring mills of one kind and another in operation in this country, and it is now a matter of frequent occurrence to see such items as the following in the columns of local newspapers:

The old Gallatin flouring mills, at Gallatin, Tenn., were sold June 24th by order of the court. W. H. Brown, Charles Brown and David Dismukes are the purchasers, who will convert the mills into a hub and spoke factory. Machinery has been ordered, and the parties interested say it will be the largest concern of the kind in the South.

Still there are lots of mills being built and most of them so far as we have been able to learn are likely to prove profitable investments. We are assured by many in the mill building line that there will be a great many fine mills both large and small built during the next twelve months, and there is any amount of remodeling and repairing being done. Many old mills which have outlived their usefulness are being transformed into something else and many are closed down for good and awaiting the doom of all things, left to the ravages of time.

THERE is much evidence to show that although our population is increasing, that the use of oat meal is decreasing. We are glad to know it for the sake of the general health of the people of these United States. It is admitted by the best elements of the medical profession that a great many cases of dyspepsia, skin diseases and intestinal difficulties have been either directly caused or aggravated by this greatly advertised commodity. The first thing an oat meal manufacturer will say when he is advocating the use of oat meal probably is "Just look at the Scotch—what a healthy people they are, and their principal article of food is oat meal." If they are a healthy people it is on account of their climate, good water, exercise, etc., and not because they eat oat meal. Did you never hear of the "Scotch Itch"? Did you not know that one of the characteristics of the Scotch people is their frugality, and is not oat meal cheap? But the Scotch are a sensible people and when they can get something else to eat for a price within their means, they "let up" on the use of oat meal quickly. If you ever saw a healthy, fat Scotchman, you can rest assured that he has had a good deal to eat besides "ait-meal parritch."

We believe there are many brands of oat meal made both here and abroad that if properly cooked are nutritious and useful, but the chances are that in the hurry and bustle of life especially in this country, that oat meal will not be properly cooked once in a hundred times at least.

MILLERS have an able and powerful friend in Secretary James G. Blaine. He raises his voice and will doubtless use

all his great influence to secure some return from Latin-American countries for the privileges of allowing sugar and coffee to come into the United States duty free.

His views on this subject are most clearly expressed in a letter dated at Bar Harbor, Me., July 11, 1890, to Senator Frye, in which he says:

I have just received intelligence from the highest commercial authority in Havana that American flour, under the new duties imposed by Spain, cannot reach the Cuban market under a cost of \$11.46 per barrel, counting the shipping price in New York at \$4.80 per barrel. Spain holds the market for herself and is able to send European flour from the markets of Cuba and Porto Rico. Other articles of American growth are likewise taxed by Spain to the point of prohibition. This one-sided commerce will seriously injure the shipping routes which are still in American hands, largely, if not exclusively.

"It would certainly be a very extraordinary policy on the part of our government, just at this time, to open our market, without charge of duty, to the enormous crops of sugar raised in the two Spanish islands. Cuba and Porto Rico furnished the United States with nearly or quite one-half of the sugar which we consume, and we are far larger consumers than any other nation in the world. To give a free market to this immense product of the Spanish plantations at the moment Spain is excluding the products of American farms from her market, would be a policy as unprecedented as it would be unwise.

"Our trade with the American republics as well as with the West India islands has been, for many years, in a most unsatisfactory condition. The aggregate balance of trade with all Latin-America is heavily against us. A single illustration with suffice. Since we repealed the duty on coffee, in 1872, we have imported the products of Brazil to the extent of \$821,806,000, and have sold to her only \$156,135,000 worth of our own products. The difference—\$644,671,000—we have paid in gold or its equivalent, and Brazil has expended the vast sum in the markets of Europe. You can readily see how different the result would have been if, in return for the free admission of Brazilian coffee in our market, we would have exacted the free admission of certain products of the United States in the Brazilian market. To repeat this error with sugar (with an amount three times as large as with coffee) will close all opportunity to establish reciprocity of trade with Latin-America.

"The charge against the protective policy which has injured it most is that its benefits go wholly to the manufacturer and the capitalist and not at all to the farmer. You and I will know that this is not true, but still it is the most plausible, and therefore the most hurtful argument made by the free trader. Here is an opportunity where the farmer may be benefited. Here is an opportunity for a Republican Congress to open the markets of 40,000,000 of people to the products of American farmers. Shall we embrace the opportunity, or shall we throw it away?

"I do not doubt that in many respects the Tariff bill pending in the Senate is a just measure and that most of its provisions are in accordance with the wise policy of protection. But there is not a section or a line in the entire bill that will open a market for another bushel of wheat or another barrel of pork. If sugar is not placed on the free list without exacting important concessions in return, we shall close the door for a profitable reciprocity against ourselves. I think you will find some valuable hints on this subject in the president's brief message of June 19, with as much practical wisdom as was ever stated in so short a space.

Our foreign market for breadstuffs grows narrower. Great Britain is exerting every nerve to secure her bread supplies from India and the rapid expansion of the wheat area in Russia gives us a powerful competitor in the markets of Europe. It becomes us, therefore, to use every opportunity for the extension of our market on both of the American continents. With nearly \$100,000,000 worth of sugar seeking our market every year, we shall prove ourselves most unskilled legislators if we do not secure a large field for the sale and consumption of our breadstuffs and provisions. The late conference of American republics proved the existence of a common desire for closer relations. Our congress should take up the work where the international conference left it. Our field of commercial development and progress lies south of us."

THE MINNEAPOLIS CONVENTION.

THE Millers' National Association met at Harmonia Hall, Minneapolis, Minn., June 17, and proceeded to business in the following order:

Convention called to order; President Greenleaf's address; Report of Chairman of Executive Committee; Reports of Secretary and Treasurer. The address of the President was received with hearty applause, and the reports of Chairman Macgill of the Executive Committee, and of the Secretary and Treasurer were approved.

The afternoon session convened at 3 p. m. A. C. Loring, chairman of the international bill of lading committee, made a report from which we extract the following:

"We have two plans marked out, either of which will take a great deal of time to carry out. I hope to get all these documents so arranged that we can present to the inter-state commerce commissioners an argument showing that we are losing our export trade through the methods of the railroad and steamship companies of this country. When we present to the inter-state commerce commissioners the documents that we hope to present, we think we shall be able to get through Congress an act, or an addition to the inter-state commerce bill, that will give us the relief we seek. National legislation then is one plan, and on that we are still working. Another plan is this: We have got a railroad official to agree that if we will guarantee his line a certain amount of work, that is, a certain amount of freight, they will give us the relief desired. If we can ship a certain amount of freight I believe this Association can by standing together get any rate it pleases, and that once established the amount of trade we have to give would be very small compared with the total amount exported or the amount that we ship to the seaboard. If the rate, for instance, that we contract for could be made from Minneapolis to London 45c. and regular was, say 32c., the amount that we would lose would be very small as compared with the benefits derived and the only consequence of such a contract would be a final reduction of rates and the adoption of a new export bill of lading. But we must guarantee any steamship company or railroad line that we take up a certain amount of freight to go into this fight. The millers are somewhat to blame for the difficulties under which we are laboring, for when it came to a question of a few cents on a rate they have deserted the roads with which they were doing business. I don't believe that it is policy for us to agree upon any steamship line, but I think it is policy to make a contract with a certain line whereby we can secure a new bill of lading. I think, though, that it is possible we can get a bill through Congress compelling transportation companies to remove freight in the order in which it is received. On this point the committee has worked so far, as I say, without material success except that we have the agreement spoken of, and the only question that remains is the amount of freight that can be agreed upon among us to induce the road to adopt our bill of lading. If our members will agree freight we can undoubtedly make a contract to give us this that will ultimately relieve the pressure under which we are suffering."

After Mr. Loring had concluded his remarks, Mr. Wilson of Glasgow, made some remarks from which we quote as follows:

The Glasgow importers almost unanimously resolved, as your president informed you this forenoon, to throw the onus of the responsibility of delays and damages and all other loss upon shippers. But from lack of support given us by London and Liverpool, this course has been delayed. It will inevitably come sooner or later, that the shippers must rid themselves of this terrible loss they sustain.

The first point I would like to refer to is the irregularity in time occupied in transit. During the past season we have received flour in 35 days, while other parcels have taken 218 days to reach our port. These particulars I give as a sample of the difficulty we have in competing with our local millers, who of course can arrange to tender flour at any date the buyer may wish it delivered. We make the sale for delivering it in two months. To enable us to do so we buy it for prompt despatch, which means within 14 days, and allowing six weeks for transit, we should have the flour forwarded to fill our contract. But when it occupies six months, neither you nor I can say that the consumer in Great Britain, who is no party to such loose contracts as are accepted by shippers on this side, is unreasonable if he in a falling market cancels contract, so that receivers not only lose the margins of profit they had arranged for, but they may be saddled with a parcel of flour for which they may not obtain an outlet, and the loss upon which may be heavy. I am not stating a fanciful case, but one that has happened frequently to all receivers of any extent, as Mr. Hamm can testify.

It is surely time enough to pay for flour when it is received. You are aware that bills of lading are never given up until the 60 days drafts are returned. And when transit occupies six months, the flour has to be paid for three and a half months before arrival; so that an enormous capital has to be at the disposal of the receiver before he can conduct his business with profit, and locking it up for the time specified without getting any returns from it is far from profitable. The export from this side is absolutely free from any risks of loss by bad debts; so that I think you should spare no effort toward making the conduct of your business on the other side as easy as possible, and until you obtain a new bill of lading you cannot attain that end.

The next point I would like to refer to is that no responsibility attaches to the agent of the steamer for any damage that goods may have received while in transit. I do not refer to ocean damage, the method of insuring with the seventy-five dollar average clause generally covers any serious loss in this respect. I refer to damage by contact with petroleum and other obnoxious smelling goods. Doubtless we get all the assistance possible from shippers on this side, but frequently no redress is obtained. A private correspondence may be received to the effect that the cars carrying the flour were all clean, and the shipping agent produces the shipper's manifest showing that no petroleum was on board the steamer. The simple cure of this evil would be the insertion of a clause to the effect that the receiver of the freight would be the responsible party for any claim that might be established against the carriers, leaving them to settle among themselves who should be entitled to bear the loss.

The clause "Master portage of the delivery of the cargo to be done by the agents of the steamer at the expense of the merchant," is one that should not be in any bill of lading. This clause manifestly gives the agents of the steamer every opportunity of shielding themselves from any claims for damage arising through carelessness. A steamer carrying 4000 tons is frequently discharged in 36 hours, and with such rapid work, which of course is greatly for the benefit of the ship owners, it is perfectly impossible to avoid the bags coming into violent contact with the beams or hatchway of the steamer. I remember a case where we had 39 sacks of flour boxed in transit. The loss on this averaged fully 100 lbs. per sack.

Again, the men handling the flour from the keel must inhale the odor of petroleum from the sacks which has sustained damage by contact with that obnoxious smelling article. But in all my experience no case of petroleum damage has been reported by the steamer's people. If the receipt of cargos was in the hands of neutral parties, damages from these two causes would be traced at once, and the claim would have a much better chance of being recovered than it has under the present mode of handling flour.

In London, the dock companies receive flour "on behalf of receivers?" and Mr. Hamm informs me that the damage is usually found out at the docks. The handling of flour by the Lord line of steamers, is done by a neutral party, and as far as I know, flour has never been delivered by their steamers smelling of petroleum. And for all short weights on boxed bags, the owners pay us at once. Unfortunately, however, the delay in transit by this line is very great and most annoying, and if they can be induced to guarantee shipment by a certain date, they are worthy of all the support the shippers can give them.

The rates demanded by the regular line are considerably in excess of those charged by neutral parties. The clause "Their tariff charges," leaves us no help but to pay them. This master-portage clause is in very few of the larger bills of lading, but is incorporated in the whole of them by the clause "the goods covered by this bill of lading are carried subject to all the stipulations of the bills of lading of the steamer or steamship company carrying the goods at the time of shipment."

Now the through bill of lading has a clause by the Red Cross Line or any other steamship line. Why should a shipper take a document which binds him to the terms of a bill of lading which are not and cannot be known to him, as Tom, Dick or Harry may carry the flour and each have separate bills of lading? (In conclusion Mr. Wilson read some instances of delays.)

He was followed by A. A. Freeman of La Crosse, who said:

I do not understand that these steamship companies are under our control but as regards the matter of delays and damages in transit. They are constantly in our control. There was something said in the morning about the New York produce exchange. Although I am an old member of that exchange I am not here to defend it. I believe that the disposition of the the New York produce exchange is to do all that it can for the millers, but as regards the transportation lines, moral suasion is all a humbug. I have had all I wanted of it with them. It is get up and do it by force, that is what is the matter. There are only two channels in which you can work, legislation or litigation. The millers of the country should lay aside all politics and work together to get a bill through Congress providing the relief desired. I think the suggestion made by Mr. Loring that the steamship and the railroad lines be compelled to forward freight in every case as it is received a very good one. The delays under which the millers suffer are due to the fact that the steamship companies are always speculating in ocean freights. If it takes two or three months before the rates are favorable they will hold it back. That is one cause of the trouble. But as I said before I believe it is only possible to work in two channels. The first is to go down to Washington with plenty of money and stay right by them as Mr. Barry did in the fight over the duty on burlaps. That is the only way I believe we can accomplish anything. Now I don't want to throw cold water on the plan of getting some one line to bid for business by giving us a new bill of lading, but I don't believe that we will ever accomplish anything until we get some precedents from the courts as to what constitutes a "reasonable time." The question is, is thirty days reasonable time in which to deliver freight? Is six weeks or two months reasonable time? I think that in the case of domestic business the court would hold that thirty days was reasonable time, and if we had a few such precedents established the transportation companies would soon find out where we stood.

Another thing: I think that the assessment of \$2 per unit is too small. We should not assess less than \$5, and have the money in the treasury to fight them with. I think we ought to make liberal assessments and fight this thing through, but as far as doing anything with the steamship people or the New York Produce Exchange is concerned, that is all bosh. The millers of this country

can furnish more cowardice than any line of business that I know of. As Mr. Barry says, he has not been able to get a case, for each man is afraid he will be prejudiced in some way. Take it in this town for instance. Here you have thousands of barrels of flour that you cannot get to New York in a reasonable time, but you will submit to this injustice for fear of offending some one. Why don't you furnish some cases for the secretary to take hold of? I tell you that the average American miller is the biggest coward on the face of the earth. [Applause.] You will never accomplish anything in the world until you have some precedents in the courts. Let the millers however lay aside all politics and instruct their congressmen to get to work for them. They have an immense power and I advise the millers to use it.

After a discussion, which was quite animated at times, the following resolution was introduced by C. B. Cole of Illinois, and unanimously passed:

Whereas, the present foreign bill of lading is regarded as a cut-throat document and its amendment is of the utmost importance for the benefit of the whole flour trade of the country, therefore, be it

Resolved, That the executive committee of this Association be empowered to co-operate in any way with any action of the millers doing an export business towards correcting the present abuses in the foreign bill of lading—whether by means of money or other assistance.

Wednesday at about 11 a. m., the Convention met and adopted the new constitution as amended by the executive committee, which was published in the UNITED STATES MILLER for June, just before the meeting of the Convention. No changes of consequence were made therein.

An informal meeting was held in the evening, transacting no business however. Adjournment was made to Thursday morning at 10 A. M., when the following report of the committee on Uniform Weights and Measures was received and the resolutions accompanying the same adopted:

Your committee appointed at our last annual meeting on weights and measures, would respectfully report, that we find different laws in the various states for the regulation of weights and measures, especially in this case in regard to flour when sold in sacks, the old standard weight of 196 lbs., for a barrel of flour is maintained by all; but when divided as is usual to be sold in sacks, we have the Missouri law, that makes the division as follows, 98, 48 and 24 lbs., while the laws of Illinois make 95 lbs. as a half barrel, 49 lbs. as a quarter and 24½ as an eighth barrel, and the same difference will be found in other states, while some of the states have no law upon the subject at all. Thus it is plain, with confusion of this kind, on a subject of so much importance, especially to millers, we must look to some higher power for a general law that shall regulate these weights for all the states, and we find this power vested in congress, by the constitution itself, which says, congress shall have power to regulate weights and measures. Therefore your committee would offer the following resolution:

Resolved, That it is the duty of congress, at an early day, to pass a uniform law, regulating the weights and measures of the various products of the United States of America, and especially do we urge that a law shall be passed that shall regulate the divisible part of a barrel of flour, now so largely sold in sacks, both in this and foreign countries.

Resolved, That each member of this convention be requested to write to his representative in congress, urging the passage of such a law at as early date as possible.

The Butterworth Bill came up for discussion, and Mr. Kreider, of Jacksonville, introduced the following resolutions which were adopted:

Resolved, That the millers of the United States in convention assembled this 19th day of June, 1890, most cordially endorse the bill introduced by Hon. Benjamin Butterworth of Ohio, for the prevention of gambling in wheat and other products of the American farmers.

Resolved, That our members of congress be and are hereby earnestly requested to support the bill, believing as we do, that its passage and enforcement will be the harbinger of better times to the millers of this country, when, relieved from the caprices of the dealers in wind wheat on the so-called board of trade, he can purchase his wheat at its real value, that value being governed by the law of supply and demand.

Resolved, That the secretary of this Association be instructed to forward copies of these resolutions to Hon. Benjamin Butterworth.

In the discussion following the introduction of these resolutions, Mr. Sparks, of Alton, Ill., said:

"I don't want to consume the time of the convention this morning, but this is a matter of much importance. Not only should a resolution of that kind be adopted but it should receive the endorsement of every miller present. If we will go back home and make up our minds that this option dealing—gambling of the worst kind—shall be stopped, I am satisfied it can be done. If the millers will urge their congressmen to support that bill I am sure that we can get relief. We have on our side a great force, the farming element, and you will find that our congressmen are shaking in their boots over the movements of the farmers. Almost invariably have the farmers' alliances passed reso-

lutions against the damnable system, and here you sit saying little and doing less on a subject that is ruinous to us and one that has not a particle of advantage in it. We don't mean that a man cannot buy wheat to be delivered next week or next month, but that it shall be purchased and actually delivered. One says you cannot discriminate. A man says he will deliver the wheat and you cannot tell whether it is delivered or not. When we see in New York 4,000,000 bushels of wheat sold in one day doesn't everyone know that it was not intended to be delivered? If a man says he intends to deliver the wheat that proves nothing. Suppose a man steals a horse and says he only took him away with the intention of returning him. Does that prove anything? Would that be accepted in a court of law? No, he would be convicted and sent to prison just the same. So if you had such a law you would have to prove the delivery and not the intention. When you see a man sell a million bushels today there is evidence that there is need of such a law. My friend Fusz introduced a few good remarks into a conversation we had last night, but I believe in getting a club and knocking the brains out of this thing, and if we kill it too dead we will resuscitate it." (Applause.)

Mr. Macgill, of Baltimore, followed saying:

"I am opposed to the Butterworth bill personally. Of course speculation in wheat has done a great deal of harm. The object of the miller is to get cheap wheat. He hasn't any love for the horny-handed son of toil, he wants cheap wheat and with speculation out of the way wheat would drop to its natural level. The same will apply to any article of commerce. There is no question though that the endorsement of this convention would damage the Butterworth bill, because the farmers would understand that all the millers wanted was cheap wheat, and if you eliminate speculation it makes cheap wheat."

Mr. Cole, of Illinois, presented the following resolution in regard to burlaps which was adopted:

Resolved, That the Millers' National Association, in convention assembled, strongly recommend the senate to confirm the bill passed by the house and reported by the senate finance committee in the matter of revision of duty on burlaps, changing the method of collecting such duty from the ad valorem system to the specific, and also to make as low a rate for such specific duty as possible, not exceeding 1½ cents per pound for all widths less than 60 inches.

Mr. Coombs, of Coldwater, Mich., introduced the following resolution in regard to insurance which was adopted:

Resolved, That it is the sense of this association, in convention assembled, that the action of some of our millers' mutual insurance companies in taking outside business, such as planing mills, stove factories, hotels, etc., is opposed to the interests of the millers and also opposed to the best interests of the insurance companies themselves; therefore, be it

Resolved, That millers shall as far as possible give their business to companies who confine their risks to flour mills alone.

The proceedings were here pleasantly interrupted by the presentation of a silver tea service to Mr. S. H. Seamans by President Greenleaf on behalf of the Millers' National Association. Mr. Seamans was so surprised that he barely said "Thank you."

After a brief recess Mr. Imbs, of St. Louis, offered the following resolutions which were adopted:

"Whereas, the flour trade of the United States with the South American states and the West India islands is seriously hampered on account of the present existing duties, and

Whereas, Spain is now exacting a duty of \$4.20 per barrel on flour from the United States to Cuba, and has recently enacted a law whereby the duty is increased, beginning July 1, 1890, to \$5.00 per barrel, thus barring the possibility of any trade in our flour in Cuba, and

Whereas, our national congress is now considering the propriety of abrogating the duty on South American and Cuban sugar, and

Whereas, the condition as now existing is unjust to the United States, and will become more aggravated when the changes now pending go into effect, therefore be it

Resolved, that we the Millers' National Association now assembled in convention at Minneapolis, again solicit congress and the honorable secretary of state to urge such acts of reciprocity as justice to our commerce demands, and if not conceded we recommend such measures to be adopted as may be regarded most effective in the interest of American industry and commerce, and further

That we earnestly solicit each individual miller and the respective state associations to present this matter to the notice of their respective senators or congressmen, and further be it

Resolved, That a committee of three be appointed to take this matter in charge, and that the secretary of this association be delegated to co-operate with this committee, and, if deemed essential by said committee to repair to Washington in order to promote the object as expressed in these resolutions."

In support of these resolutions he said:

"The matter of seeking additional channels and in fostering every avenue whereby the flour trade of this country can be sustained and increased is one that merits the most serious consideration as it affects the interests of every miller in the United States. The well known fact presented to our notice by the best informed authority in our brotherhood is that the milling capacity is so

much in excess of the needs of production and wheat that the best crop can be ground up within a period not exceeding ninety days thus leaving three-fourths of the entire year idle to the millers. The capacity is the fault of overproduction and its effects upon the price is only too well marked by the value of flour during the year. The home consumption takes but a part of our production and the necessity of foreign trade advances its importance foremost. We find in other localities barriers which are already presenting themselves against an increase of foreign commerce, and it appears that from the present channels no improvement in the way of relief may be looked for. Thus our field is more closely contracted towards our nearest neighbors who in bygone years have been favorable patrons of our flour. For instance—Cuba with its present population consumes nearly a million barrels of flour per annum yet owing to the peculiar condition of duties this trade has been diverted from us. Statistics show us that the amount of our purchases from that country are equal to more than five times what they buy from us, as we pay them now in the neighborhood of \$40,000,000 in gold. Similar illustrations might be cited from our neighboring countries, yet I believe that this will suffice to indicate the propriety and justice of this convention asking assistance from the government, and I think that with proper presentation on the part of the state department to the Castilian government there is every reasonable assurance that in this age of reciprocity the matter will receive the proper and just consideration that it deserves."

After a few remarks from Mr. Freeman of similar import the resolution was adopted, and a committee consisting of Messrs. Imbs, of St. Louis, Freeman, of La Crosse, and Macgill, of Baltimore, was appointed to take the matter in charge.

The committee on nominations for officers for the ensuing year reported as follows:

For president, A. R. James, Buffalo; for first vice-president, Wm. Sanderson, Milwaukee; for second vice-president, Henry Halliday, Cairo, Ill.; for treasurer, S. H. Seamans, Milwaukee. Mr. Espenchied moved that the secretary be instructed to cast the ballot of the convention for the officers as named. This was carried unanimously, and Mr. Sanderson was appointed a committee to escort Mr. James to the chair. While he was walking up to the platform Mr. Baldwin moved that the convention unanimously ratify the action of the secretary in casting the vote. This was done, and Mr. James having taken his seat amid a hurricane of applause said: "It is with no little diffidence, gentlemen of the convention, that I stand before you. As I gaze into those upturned faces and realize what an intelligent body of business men compose this convention, I am somewhat surprised that your choice should have fallen upon me. I feel the importance of the honorable position as president of the Millers' National Association, but it would be presumptuous in me to assume that this great honor was intended for me alone, but I recognize in your choice consideration for the eastern membership of our Association and in behalf of that membership, and for myself I sincerely thank you for that honor. I accept the position with no little hesitation. Alone I am not equal to carrying out the work that is to be performed but I ask your advice and hearty co-operation and with them the Millers' National Association working as a unit can accomplish great good for its members. To do this requires unanimity on the part of its members and on the part of its officers who are your servants to do your bidding and the members even more than the officers are responsible for the success of the Association. For the incoming officers I bespeak your hearty support, and I again thank you for the distinguished honor you have conferred upon me."

Mr. Cole, of Illinois, then moved that a vote of thanks be tendered the retiring president for the efficient manner in which he has conducted the affairs of the Association during the past year, coupled with a sincere wish for his future prosperity and happiness, which was carried unanimously, and after passing a vote of thanks to the millers of Minneapolis which was done amid overwhelming applause the convention adjourned until 2:30 P. M.

The afternoon session was called to order by the new president, A. R. James. A. A. Freeman presented the following resolutions which after discussion were adopted:

Whereas, there is in this country an immense overproduction of flour and a consequent pressing necessity for a reasonable curtailment of output by united action, therefore be it

Resolved, by the Millers' National Association that the executive committee be authorized to take action in the matter by way of signature-consents to limit production to the extent of one-fourth, or one-third, for the crop year beginning Sept. 1, 1890. Nothing to be binding unless the largest firms or corporations join in the agreement, and it is not to become operative until not less than 80 per cent. of the capacity of merchant mills represented by members of the Association shall have signed.

Resolved, further, that the basis of curtailing production shall be a shutting down of each mill of not less than one half the time suggested during the first half of the crop year, or the whole of said period of shut-

down to be during the first half, the same to be at the option of the proprietor. Heavy bonds to be given in all cases for a faithful performance of agreement.

The bill of lading matter was again referred to, and it was reported that it was in the hands of the committee who would report individually to members when ready. After passing votes of thanks to all for courtesies extended the convention adjourned *sine die*.

CONVENTION NOTES.

THE Edw. P. Allis Co. of Milwaukee, exhibited the Gray noiseless roller mill and the Reliance sieve scalper. Full lines of their machinery in practical operation could be seen in most of the Minneapolis flouring mills. Mr. W. D. Gray was present.

THE Jno. T. Noye Mfg. Co., of Buffalo, exhibited rolls and a handsome sample case of bolting cloths.

THE Jno. Mills Mfg. Co. of Columbus, O., exhibited their Universal Flour-Dresser and the new Air Belt Purifier which was an object of great attention.

THE Knickerbocker Co., of Jackson, Mich., had on exhibition the Holt Dustless Purifier which was an object of keen interest.

THE Cockle Separator Co., of Milwaukee, exhibited Cockle machines, the New Era Scalper, etc.

THE "Chronos" Automatic Grain Scale was an object of interest to mill and elevator men present. W. Reuther was present and patiently explained the working of his scales.

THE Richmond Mfg. Co., of Lockport, N. Y., had an attractive display of their well-known machinery, which has a place in most well-regulated mills.

THE Stilwell & Bierce Mfg. Co., made an exhibit, and invited visitors to inspect the new Porter Mill at Winona recently built by them.

H. J. DEAL was on deck with a full line of his endless variety of millers' specialties, including a phonograph.

S. HOWES of Silver Creek, N. Y., exhibited his grain-cleaning machinery, Mr. W. E. Sherer, the north-western representative, doing the honors.

HENRY HAMPER's jolly good face beamed on the visitors, and he evidently enjoyed the occasion.

B. F. RYER, western agent of Huntley, Cranson & Hammond, Silver Creek, N. Y., explained the good points of his grain-cleaning machinery to all inquirers. Mr. Ryer's head-quarters are at No. 63 S. Canal st., Chicago.

R. P. CHARLES, of New York, the veteran importer of bolting cloth, had a neat exhibit. After the Convention a number of his friends joined him in a fishing excursion.

(Written for THE UNITED STATES MILLER AND MILLING ENGINEER.)

THE YOUNG MILLER.

BY OBSERVER.

A YOUNG man, or old one, for that matter, who is anxious to make a record as a good miller will not wait to see whether his employers credit him with saving or careful management, but he will go ahead and do the best he can, regardless of whether it is recognized or not. By this course he is doing the best for himself, and he earns the biggest kind of a dividend on his wages. He is paid while learning, as advertisers say, and when he goes into some other place—as he certainly will, if his employers are not shrewd enough to see his value—he will have a right to rank himself higher than before his efforts to improve. Such a man has an increased market value in his services and the same causes which led him to desire to rise will inevitably lead him to a better place to sell his labor.

* * * * *

But how shall a young man rise higher? That is the question all ambitious young

men now ask themselves, and the answer is so easy to give that we give it right here. He shall rise higher by the work of his hands and his head. Work is the one great specific and highway for all advancement; intelligent work and effort well bestowed. "What kind of work?" says some one, possibly, and the answer to this is also easy—intelligent work; effort well directed. The young man whose opportunities have been very few may feel that this is a stone, instead of the bread he expected, but it is not, it is the very loaf itself.

A young man who wishes to become a good miller will not be content with the gossip he hears from Tom, Dick and Harry, as to the action of this or that detail, or the functions of certain parts. He will go direct to the fountain head of all mechanical operations, philosophical principles, and master them. When he does he will be in a condition to absorb more information in other directions.

"This is very easy to say," some young man who reads this may reply, "but the principles won't absorb, and after I have read them I don't know any more than I did before." Probably not; and for a very sufficient reason; he has casually read, with a lukewarm interest, instead of actually studying and putting his will upon the matter with the positive intention of conquering it. Moreover, at the first few weeks' application, his mind is fallow, his brain is dull; it needs mental exercise to enliven it. A beginner in brain work is precisely akin to the beginner in hand work—both of them get tired out with the unusual toil. Head work is hard work. It is the hardest kind of work; there is no doubt about this. The student over problems consumes just as much vital energy as the blacksmith at his anvil, and of a more costly kind to replace. The student certainly cannot labor as many hours as the blacksmith. But this must not discourage any one who attempts to get on by self-culture. He must up and at it again, and keep at it as long as he can find time for his other labors, and the result will be that after awhile the young student will find he learns more easily than he did, just at the student who hardens his muscles by toil finds that his back aches less than it did when he first took up the axe.

MILWAUKEE REVIEW.

THE Milwaukee market was very steady during the past month. Sample wheat remains very much the same. Rather higher if anything, and good milling. Wheat is very scarce and held firmly. No. 3, 4 and rejected is in light receipt and the demand is quite limited.

Wheat in store here of all grades at this writing is but 476,543 bushels, and this seems to be ample under the present disposition of the millers. Prices of flour as predicted in my last gave way about 25c. per barrel, and although there has been a good export demand and the domestic trade has been very fair, it has been found impossible to restore the prices of June 15th.

Present prices of flour are about as follows:

No. 2 Spring Wheat Patent.....	\$4.75@5.00
Soft Spring Wheat Patent.....	4.50@ 4.75
No. 3 Spring Wheat in sacks.....	4.25@ 4.50
Clears, Choice Bakers in sacks.....	3.25@ 3.50
Clears, Choice No. 3 Wheat.....	2.75@ 3.00
Straights Choice Bakers.....	4.00@ 4.25
Straights No. 3 Wheat.....	3.50@ 3.75
Low Grades.....	1.50@ 2.25
Winter Straights in barrels.....	4.25@ 4.50
Rye Flour in sacks.....	2.50@ 2.75
Rye Flour in barrels.....	2.75@ 3.00
Millstuffs are stronger and from 10 to 25c. higher; scarce and freely taken.	
Bran sacked, per ton, car lots.....	\$11.00@11.25
Fine middlings, sacked.....	13.25@ 13.50
Corn meal in bulk.....	14.00
Ground feed corn and oats.....	11.50@ 12.50

The feed trade is the only thing that helps the miller out.

Our millers have come to think they are only public benefactors anyway. They are expected to be ever present to take the wheat, good, bad and indifferent, pay

a good round price for it, make A 1 Pat. from it and sell it to the public for a little less than the wheat cost.

The first car of new wheat arrived this morning and was a very choice sample of Kansas Turkish wheat. It was promptly taken by the Gem Milling Co., and will be converted into "Our Gem" patent for the British trade.

Those Britishers are very anxious to get our flour, but they manage some way to get it at their own price, which is not altogether satisfactory to the millers.

In making the round of the millers this morning I found they were not disposed to talk much nor answer questions. Commencing with C. Manegold, of the Reliance, the following replies were elicited:

"Been running full time. Will shut down at the end of the week. Yes, orders are plenty, but no profit. Just say that a man must get a powerful magnifying glass to see the profits."

Mr. Zahn, of the Gem: "Have been idle. Just started up. Good Milling wheat is too scarce and too high or flour too low."

L. R. Hurd, of the Daisy: "Have been running up to present time. Will shut down to-night and remain until the new crop is ready to mill. Stocks of flour in the mill is very light."

Mr. Faist, of Duluth Mill: "Have been shut down for over five weeks. You may say that I won't start my mill again until wheat is 75c. per bushel." When asked if he had stock of flour sufficient to keep his customers and himself until that should come, he said: "Yes, that will come within four weeks."

B. Stirn, of the Jupiter: "Shut down about ten days ago. Putting in new engine for more power. Over production is the cause of poor prices."

W. Sanderson, of the Phoenix: "Will probably run through the rest of the season. Don't expect to make any changes. No profits in flour, but feed is good, and good demand abroad for flour."

John Kern, of the Eagle: "Shut down about a week. May run about a week more on this crop after a while. From my foreign correspondents I learn that up to the first of June the crop prospects all over Europe were flattering. Wet weather set in about June 1, and they now complain of excess of rain and thereby serious damage to the wheat and rye. One gentleman writing from Antwerp, June 30th, says: 'If this wet weather lasts another week our crops are ruined.' The public cables have noted rain about every other day since that writing. How much damage has been done remains to be seen. If that Antwerp man's conclusions are correct, they will need some of our wheat. Let us take courage and try again. Our Government assures us we are to harvest 425,000,000.

DONALDSON.

THE Edw. P. Allis Co. have recently received the following orders: P. S. Masters, Chillicothe, Ill., 75-bbl. mill; King, Edwards & Thomas, Ethel, N. C., 50-bbl. mill; Peter E. Kern, Pigeon Falls, Wis., 60-bbl. mill; Jas. S. Milne, Adrian Mich., 200-bbl. mill; Hoffman & Kerr, Marcellus, Mich., 100-bbl. mill; Joshua Thornton, Albion, Pa., 40-bbl. mill; J. P. Grier, Venus, Pa., 30-bbl. mill.

DURING the Knights of Pythias Conclave recently held in this city the Pabst Brewing Co. presented each knight calling upon them with a beautiful souvenir in the form of the story of Damon and Pythias, finely illustrated. It was a happy thought of the Company, as every one so fortunate as to secure a copy will doubtless keep it carefully for many years, and will not forget from whence it came.

AT Regina, Man., June 15, fire destroyed the Regina grist mill, together with a storehouse owned by Mr. McGin, of the Indian Department, Ottawa, and three loaded box cars. The elevator was saved. W. H. Hansell is the heaviest loser. The total loss is \$14,000; insurance \$8,000.

[From our Regular Correspondent.]

OUR BALTIMORE LETTER.

"Oricle" give the Experience of a Miller in Baltimore—The Business from a Broker's Point of View—A Bit of Advice—A Letter full of Spice and Readable to the Last Line.

WE have an incident to relate this month which came under our own observation of late, and which, no doubt, will prove interesting to the extremes to which some mills will go to "save at the spigot and waste at the bung-hole." Once upon a time there lived out west a certain miller whom for convenience we will call Simon, not surnamed Peter.

About a quarter of a century ago this self same Simon was a high-cock-a-lorum among the milling fraternity of the country, and consequently enjoyed a large and lucrative business with the flour trade of Baltimore.

In those days of our fathers it was the custom for the miller to sit back in his office, cock his feet in the air, puff a good cigar and wait for orders to come in unsolicited which paid him generally a profit of from one to two dollars a barrel.

No agents or brokers were needed then simply because production was limited and the world moving only at a horse-car pace.

Millers like this old Simon, however, imagine that business can be conducted that way to-day, and the result is that instead of being in the front rank as formerly, they are now found in the back yard of obscurity groping for recognition.

This is a hustling age, and the fossils of antiquated proclivities have no more chance than a bob-tail bull in fly time.

A few days since while on our regular daily rounds to the trade, we happened into a wholesale flour and liquor store of our town, and while engaged there with one of the proprietors of the establishment overheard the following conversation take place between another member of the firm and this same old Simon, not surnamed Peter, whom we had thought dead long ago, but who it seems had just arrived from the west "all dressed in his best Sunday clothes."

"Well, Mr. So-and-so," says Simon, speaking to the proprietor referred to, "when I was here some years ago you bought your flour from them there brokers and millers' agents principally, do you do it now?"

Mr. So-and-so quickly glanced at your correspondent who was standing some distance off, and from whom he buys largely, as if in a quandary, but not wishing to make the acquaintance of Simon, not surnamed Peter, we gave Mr. So-and-so the wink to lead him on without disclosing our identity and without committing himself unservedly.

Mr. So-and-so then replied: Oh no, we do not buy from them exclusively, to which old Simon approvingly smiled, nodded his head, rubbed his hands and in a loud tone of voice said: "That's right; that's right, Mr. So-and-so; for you know that you can buy from us cheaper than from them fellers, as we millers always allow their commissions off where you buy from us direct."

As our blood at this juncture began to boil, and in fact was already nearing a point seven times hotter than its normal temperature, we concluded, for fear of an explosion, to beat a hasty retreat, but even then we failed to make our escape before Mr. So-and-so had invited Simon to take a glass of old rye whiskey, which, be it said to his credit, he refused to do, and Simon in turn had invited Mr. So-and-so to take a trip up through New England with him free of expense. It is hardly necessary to state that this invitation too was very wisely declined.

We have had a great deal to do with millers in our time, but never in all our experience have we heard one of them admit before that he paid nothing for an agent's services, but, on the contrary, the very first obstacle in the way of an agent forming a connection with a desirable mill is this very compensation bugaboo, which Simon now informs us is paid by the buyer and deducted where he deals direct.

It is true that we have known of some shyster, unprincipled and unscrupulous mills that have allowed commissions off to customers, for the time being, as a bait to retain their patronage, after dispensing with their agents whom they had employed to introduce their flour and build up a trade, but we positively deny that such a thing is general or that it is ever done by any honest or respectable mill or that dealers can buy cheaper direct than through an agent.

Now, as an illustration, take this man Simon, not surnamed Peter, and see what he accomplished after declaring so much.

He came here to Baltimore all the way from the west burdened with a heavy railroad and hotel bill, and notwithstanding his liberal offer to include a free excursion to

patrons we venture to assert that he sold not a single barrel while in our midst.

The reason is palpable to anyone with even half a mind.

Where so much is offered for nothing it is always safer to give it a wide berth, for sooner or later you are bound to be stuck, whether or no, if you bite, and just so was it the case with Simon who made it appear that he was giving the earth to his friend; and not until the subject of price was broached did it ever occur to his audience to doubt his sincerity for a moment, but when he named a figure for his flour that was 30 cents higher than agents were asking for the same goods, the truth suddenly dawned on us and convinced us that his statement regarding commissions was false and his proffered hospitality a fraud. In a word, Simon, not surnamed Peter, included in the price of his flour the expense attending his journey hither, agents' commissions and the contemplated "free" trip through New England, and the whole handicapped him so greatly that he found himself in the soup when he tried to compete with the agents whom he endeavored so contemptibly to injure.

Simon therefore is not only out of pocket to the extent referred to, but failed absolutely to sell his flour. How shortsighted in him then, and all like him, not to employ an agent, go home and stay there, and save his money.

Simon left here, however, a sadder but a wiser man, and if he will but heed our suggestion it will not be long before he is on the right road to market his flour with profit.

There is no use talking; the millers' agents are here to stay, and the big mills of the country already appreciate that fact and patronize them accordingly.

They are the cheapest and most effective means to reach the trade, and no mill is up to the times without one.

It is all poppycock for millers to imagine that dealers can be bulldozed or bamboozled into buying by such methods as those adopted by Simon. They are too smart for that while production and competition continue so great.

Millers should remember that this is an age of cut-throat, hot-bed competition, and the agents who win success are those who make daily visitations to every buyer in the trade, and, oblivious to fear or daunt, rebuff or insult, press their way into the very privacy of the dealer and there hang to his skirts, crawl up under his vest and sleep with him, so to speak, until they have accomplished their purpose.

We know of many such indefatigable workers in the business, and it is but just to say that they have been liberally rewarded for their labor and are now an independent set, always in demand and virtually in control of the cream of the trade. How silly then for green-horns like Simon to come to town and pretend to buck up against and cope with such a well organized and thoroughly equipped opposition.

These high-toned agents, be it understood, who have such a following, and of whom we have been speaking, never curry favor with, or toady, cringe or knuckle to anyone, be it great or small, and he who does it, no matter who he is, can with safety be put down as belonging to a different class.

There are others, however, who are perfectly worthless, not even worth their salt, and consequently dear at any cost, and the miller, when making a selection must discriminate between the two or else be liable to be left with an elephant on his hands.

There are many Simons in the milling industry, and the lesson to be learned from the experience of him who visited Baltimore recently, and the one which we would have every miller take home to his breast, and ever roll it as a sweet morsel under his tongue, is, that it don't pay to save at the spigot and let out at the bung-hole.

In conclusion, let all who have not done so already, take our advice at once and speedily employ a first class agent in every market, and at the end of the year you will find your coffers bursting with boodle, your trade far in excess of that enjoyed under your present idiotic and tomfoolery policy, and your bosoms swelling with pride as a natural outcome of your enterprise and general prosperity.

While the Baltimore flour market touched a low ebb as regards prices and trading, since our last report, it has nevertheless put on considerable style of late, and at this writing, like a pendulum, it has swung to the other extreme and is now conspicuous for its strength and activity.

In fact, this has been a Jim Dandy week for business, everybody is busy and consequently every body happy.

The improvement in values, however, has been only slight, notwithstanding that certain mills have gone off half cocked as usual, and instructed their agents to advance prices 15 to 25 cts. per barrel.

There are some mills you know, that work on the principle of the lame man, and for fear of not "getting there" in time on an advance invariably start out a little ahead of the procession. There is no question about there being a healthier undertone to the market and a demand sufficient to absorb all offerings around old figures with here and there a small premium paid for desirable fresh grand old Winters, which are relatively scarce and badly needed, but further than that we fail to see any change in quotations. It is true that there is a general disposition to ask more but when it comes to making sales, figures very near the bottom are recorded. It is easy enough to ask a great big price, but a very different thing to get it.

Stocks and receipts are both light, however, and that accounts for the present firmness and urgency, and if mills will only continue to withhold consignments from eastern markets, they will soon see this improvement become more apparent, which will increase more and more as the days go by, and in the end bring them that recompense which is sure to follow such a course. Minneapolis patents, of the Angel Food standard, have been marked up from \$5.00 to \$5.15, while other makes just as good from the same place, but without the reputation, are going still at the even figure.

Offerings from other points range at all sorts of prices according to quality, but we quote the extremes including firsts and seconds, on the spot and to arrive at \$4.75 to \$5.10. Considerable has been done in spring patents recently, but in every instance at the old figures.

Jobbers have bought pretty freely at and under \$5.00, and are now prepared to crawl into their holes again and play their little waiting game until something tempting swings in sight.

What we need in Baltimore above everything else is a good old fashioned red hot rip snorting advance in flour to break up this infernal cut throat competition among jobbers, which is not content to job the article at a fair living profit, but which prefers rather to give it away to customers for months ahead and then guarantee them against loss.

That is the kind of business some of our merchants are doing, and it will require just some such convulsion in the market to correct the abuse and weed out those most guilty of the practice. The idea of backing a baker or a grocer with enough flour to last him for a year to come at barely cost price, and then guarantee him against loss in addition. In other words, if the market declines in the meantime the baker or grocer gets the benefit of it, but, on the other hand, if it advances then the dealer must furnish the flour at the original price.

If that isn't a case of "heads I win, and tails you lose", then we never knew of one.

The root of the evil is competition, jealousy and a great desire to splurge.

An advance of \$2.00 a barrel would break the miserable system up forevermore, and for that reason we would like to see it come and that right early.

Something has been done in spring bakers' at \$3.90 of late, which is an advance of ten cents over previous quotations for that particular brand, but no urgency is apparent even at that modest figure as dealers generally loaded up when prices were \$4.00 and over.

Spot offerings of every description are getting very scarce indeed, and the consequence is that agents are busy as bees—in fact having a regular picnic of it—the outcome of which being some heavy transactions in stock to arrive at satisfactory prices.

As we have intimated before fresh ground old winters are practically a thing of the past, as none can be had except at fancy figures which dealers refuse to consider while the new is so near at hand. We pity those, however, who have sold the old to customers covering a long period of delivery, but owing to the scarcity are dependent upon the new to fill the bill. Much trouble is brewing for such. Ohio, Indiana and Illinois patents, straits and clears, on the spot and to arrive, range respectively as follows: \$4.75, 5.10, 4.40, 4.65, 4.10, 4.35.

E. O. Stanard & Co. of St. Louis report through their local agent a sale of 6,000 sacks of patent to go abroad at a price equal to \$5.50 Baltimore and have advanced him to that figure.

Other St. Louis mills are asking about the same price except the Kauffman Milling Co., which generally sells lower than any of them and consequently gets the orders.

Some Ohio mills are up in the sky again and now demand \$5.25 for patents which their neighbors are willing to sell at \$5.00.

It looks to us as if springs were going to be the king bee on the new crop and winters relegated to a back seat.

At a discount or even at the same figure the former commands the preference in this market everytime.

But when you come to think about it winters have fought a good fight and completely shorn springs of their former glory. When springs first made their appearance they commanded a premium of \$1.75 a barrel over winters, but this has been cut down gradually year by year until now no difference at all really exists between them, a fact which certainly speaks volumes for winters. After scanning the horizon and taking in the whole situation carefully we are of the opinion that the outlook is for a propitious business year on the new crop and at better prices too. City mills report on active local trade and a rattling demand for export.

Sales of Rio extra for the week have been simply marvelous and aggregate some 12,000 barrels at prices ranging from \$4.80 to \$5.00, an improvement of 25 cts. per barrel since our last report.

Output for the month of June was only 24,539 barrels, the result of two mills being down and another part of the time.

Clearances for the month have been good considering the receipts.

Stock of flour in Baltimore July 1, exclusive of that held by city mills was 42,000 barrels. We quote as follows:

Western Winter Wheat Super.....	\$2.00@2.50
" " " Extra.....	2.75@3.75
" " " Family.....	4.10@4.65
Winter Wheat Patent.....	4.75@5.10
Spring " " ".....	4.75@5.15
Spring Wheat Straight.....	4.30@4.50
" " Bakers.....	3.80@4.10
Maryland, Virginia & Penna. Super.....	2.00@2.50
" " " Extra.....	2.75@3.75
" " " Family.....	4.00@4.50
City Mills Super.....	2.00@2.25
" (Rio Brands Extra).....	4.80@5.00
Rye Flour.....	2.75@3.10
Hominy.....	2.75@3.10
" Grits.....	3.00@3.25
Corn Meal, per 100 lbs.....	1.00@1.15

The wheat market here has also reached some very low depths during the month, but at this writing has its head and tail in the air and promises some rich capers before our next report is due.

Indeed the past week has been a red letter week in the Baltimore wheat market, for it has been active, strong and higher throughout, and shows a gain at the closing to-day of five cts. on cash, three cts. on July and two cts. on August, over the figures of a week ago.

Receipts have been liberal and include new southern of excellent quality principally, but owing to large shipments stocks show no appreciable increase.

Arrivals of new southern so far this season aggregate 401,966 bushels against 122,496 bushels for the corresponding period of last year. Extreme range of prices to-day was 83@98, against 62@88 on the same date a year ago.

The large advance noted in cash and the near by options is due to the ravenous appetites of millers, shippers and mixers alike, who scramble for the daily offerings in such a manner as to convince the most bearishly inclined that there will be no danger of a glut of the cereal in the near future as far as this market is concerned at any rate.

Exporters are doing a rushing business both in beach-room parcels, based on cheap tonnage and full cargo lots.

Foreigners are evidently hungry for the stuff, and we only regret that restricted stocks prevents our satisfying them to the fullest extent while they are in need. A hungry foreigner is even worse than a Chicago short, and it is always safe to appease the one and relieve the other at the very instant he shows a disposition to buy, for observation teaches us that when he really does want to do that thing, he wants to do it with a vim, the like of which is displayed by no other character of purchaser in the trade.

A dealer seldom goes wrong if he sells his customer when he is in the notion of buying, in fact that is the only time to dispose of your wares advantageously.

The quality of new wheat in this section is simply magnificent, and indeed we doubt if it were ever equaled before, but the yield on the contrary is very disappointing, averaging not over one-half of what was expected by farmers previous to harvest.

The crop in Maryland and Virginia therefore will not pan out much over 50 per cent. of an average.

Millers down here are making hay while the sun shines, by gobbling in all the desirable offerings they can get their hands on regardless of price.

Speculation has changed its base since our last review, and it is hard indeed now to find a bear anywhere.

A Baltimorean though is not in his element when on the bull side, and for that reason it is a strange sight to see our large traders all arranged on that side. The heaviest and boldest speculator in Baltimore claims that the wheat crop will show a deficiency of 50,000,000 bushels this year, and that with bad and continued unsettled weather abroad Europe will require all and more of the cereal than we can spare, and in view of that predicts \$1.25 for wheat on the seaboard.

It is all a weather market now, and of course values will fluctuate according to the freaks of the elements, but as Europe has sized us pretty well and will withdraw her support if we attempt any monkey business, we are of the mind to let well enough alone and be satisfied with the present bulge for one season.

It is the unexpected that always happens, and while everybody is of one way of thinking and believes in much higher prices, the reverse is just as likely to follow as not, and he that is wise will not take that chance and risk what profit he may have now.

We believe in buying on breaks, but also in selling where a profit is assured.

Don't wait for the earth, but give the other fellow a chance.

The government report speaks well for spring, but tells a doleful tale as far as winter is concerned, the average however being no worse practically than a month ago.

Spring wheat though is passing through its most critical period now, and it may yet suffer an experience similar to that of winter, who knows? It is high time for wheat to get on a higher level, and if it can maintain the progress it has made in that direction already, its good effects will soon be felt by every farmer in the country.

You cannot, however, expect to make up in one season what it has taken years to lose, but take comfort and encouragement from the fact that the epoch of depreciation has ceased and that we are now on the up turn again—slowly but surely.

Stock of wheat in Baltimore to-day is 254,611 bushels.

CLOSING AND COMPARATIVE PRICES.

Wheat	Closing	Same time
No. 2 Red.	To day.	last year.
Spot.....	95 @ 95½	— @ 85½
Steamer 2.....	92½ @ 93	— @ —
Fultz.....	90 @ 98	75 @ 90
Longberry.....	91 @ 98	80 @ 90
July.....	93¼ @ 93½	84 @ 84½
August.....	92¼ @ 92½	81¾ @ 82
September.....	92¾ @ 92¾	81¾ @ 82
December.....	— @ —	81¾ @ 84½

The Baltimore corn market of late has ruled active, strong and higher also, and closes to-day showing a gain of 4½ cts. on cash and three cts. on the options, over the figures of a week ago.

Dry weather and a large short interest were the causes that brought about the advance. Stocks here are exceedingly light, the result of export demand and continued heavy clearances. Baltimore is the banner exporting market of this cereal now, and proposes to maintain that prestige for all time to come.

The movement to the seaboard has been hampered by harvest operations, but as that interruption will be brief, we look for an avalanche of corn shortly.

Speculation is favorable to the bear side of corn, and in such the case particularly since the government reports last showing. Stock of corn in Baltimore to-day is 122,941 bushels.

CLOSING AND COMPARATIVE PRICES.

Corn.	Closing	Same time
Mixed.	To-day.	last year.
Spot mixed.....	46 @ —	42¾ @ 42½
" No. 2 white.....	45 @ —	— @ —
" No. 3.....	— @ —	— @ —
" Stmr. mix.....	— @ —	— @ 41
" " white.....	— @ 44	— @ —
South White.....	49 @ 50	48 @ 50
" Yellow.....	48 @ 49	45 @ 45
July.....	44¼ @ 44½	42¼ @ 42½
August.....	43¾ @ 43¾	42¾ @ 42¾
September.....	43¾ @ 44¾	42¾ @ 41¾

ITEMS OF INTEREST TO THE TRADE.

Hear what P. H. Macgill of Baltimore said at the Minneapolis convention regarding the Butterworth bill: "I am opposed to the Butterworth bill personally. Of course speculation in wheat has done a great deal of harm. The object of the miller is to get cheap wheat. He hasn't any love for the horney-handed son of toil, he wants cheap wheat and with speculation out of the way wheat would drop to its natural level. The same will apply to any article of commerce.

There is no question though that the endorsement of this convention would damage the Butterworth bill, because the farmers would understand that all the millers wanted was cheap wheat, and if you eliminate speculation it makes cheap wheat."

We are sure that no words from us are necessary after such a frank confession from one of the most prominent, successful and enterprising millers of the country. Mr. Macgill has simply reiterated what we have time and again claimed in these letters, and he is dead right about it too, beyond a shadow of a doubt.

The farmer needs as many buyers as he can get for his grain, and not as few as he can get, as the advocates of this bill would have us believe.

Mr. Macgill voted for the resolution before the convention because he thought it would have the effect of killing the bill rather than helping it, which, to our mind, was a most unique and original thing to do

J. T. Moulton & Son, of Chicago, have been awarded the contracts to build two new grain elevators at Baltimore for the Northern Central road. One, of 300,000 bushels capacity, is to be located in the heart of the city, and designed especially for the storage of oats, and the other is to be built on the site of the recently burned elevator at Canton, with a capacity of 1,250,000 bushels. Both are to be completed by March 1st, 1891, when they are to pass under the control and management of the Baltimore Elevator Co., of which Henry A. Parr is president.

Among the visitors on 'change during the month were P. P. Simmons, representing A. A. Freeman; M. A. Toomey, representing Christian Bro. & Co., of Minneapolis; W. B. and M. B. Carr, of Hamilton, O.; E. B. and J. A. Mumma, of Dayton, O.; A. A. Keene, of the Sidle-Fletcher-Holmes Co., of Minneapolis; Mr. Moore, sub-agent of Carhart, of New York, and eastern agent of the Daisy Roller Mill, of Milwaukee; H. A. Deardorf, of the Isaac Harber Co., of Fostoria, O., and others.

E. R. Bacon, representing a syndicate of capitalists, has bought and paid for about 50,000 shares of Baltimore & Ohio Railroad stock, which, it is said, virtually gives him control of the road.

L. J. Lederer, head of the well known flour firm of S. P. Thompson & Co., who has been visiting Niagara and other northern points of interest, returned to his place of business last Monday, much benefited in health.

John M. Cameron, general manager of the Gambrin Export Co., of Baltimore, who has been abroad several months making connections for his firm, arrived home last week.

Mr. French, one of the popular salesmen of the flour jobbing firm of Rinehart, Childs & Co., has left for the Northwest with a jolly party of excursionists, under the management of the Northwestern Investment Co.

The Baltimore Corn & Flour Exchange was closed from the afternoon of July 3rd to the morning of July 7th.

F. J. Clark, local editor of the *Northern Miller*, stopped in Baltimore a few hours while enroute to Washington, D. C., recently, with a party of Minnesota press excursionists.

A. T. Safford, general agent of the Pillsbury-Washburn Flour Mill Co., was on 'Change here yesterday. Mr. Safford told your correspondent that his concern had sold within a day or two a lot of 500 cars, 100 patent and 400 bakers', to go abroad at satisfactory prices, and that his firm had since been offered a slight advance for more. Mr. Safford goes from here to Atlantic City, where he will remain a few days, and then go to Minneapolis by the way of Pittsburgh. We wish Mr. Safford many more sales in 75,000 barrel lots.

E. Thomas Rinehart, of Rinehart, Childs & Co., being in poor health, has been compelled to take a much needed rest and change of air, and has gone to Deer Park for the summer.

The Mt. Vernon and Silver Spring Mills, of Baltimore, have resumed operations after being down for a month.

E. A. Gardner & Co., and Fangmeyer & Co., two of our oldest and most successful flour jobbing firms, are treating their mammoth warehouses on Howard street to new coats of paint.

Robert M. Wylie, senior member of the flour and grain firm of Wylie, Smith & Co., of this city, is spending the summer with his wife at Narragansett Pier.

J. M. Wharton, of Baltimore, one of the leading millers' agents of the country, has returned from a short visit to his mother, who resides in Virginia.

Harry S. Belt, another of our popular millers' agents, is back to his post again, after a brief holiday.

B. Ruhl & Sons, one of the most reputable and trustworthy firms in the trade, informs us that they bought a car of spring patent recently from a local commission house at \$4.40, which was equal in quality to that of any coming to this market, and yet some mills will persist in consigning.

Baltimore, July 12, 1890.

ORIOLE.

[Written for THE UNITED STATES MILLER AND MILLING ENGINEER.]

MILLING PROCESSES.

BY DE FACTO.

THE rapidity with which new, or alleged new processes in milling are being offered to the world admonishes us to be a little chary about accepting them without thorough and satisfactory tests.

It is impossible in this age of machine methods to come to any definite conclu-

sion regarding a given new idea, without waiting for the idea to become old, to a degree at least. And while the majority of us are pronounced in favor of advanced ideas in milling, yet we cannot, therefore, adopt as satisfactory every new idea that may be put forth.

The art of mill building, like all other industrial arts, and, like all human knowledge, grows or advances only as new facts are brought to light and demonstrated to be facts. While millers are not very much inclined to give away the information which they have gained, or impart the facts which they have gained to others, I think the time is coming when there will be the same free interchange of opinions among millers and milling engineers that now takes place between engineers and expert workmen in other lines of industry. It is not so hard now to get men to tell what they really know about milling matters, though still the amount told, which is not known for fact, would make much the larger volume. It is because of the disinclination among millers to impart information and to accept it from others, that so few millers are really competent to lay out the system for a mill and insure its doing good work from the start. Under the old style of milling, the miller laid out the chart and directed the sequence of the mill's operation. Now this duty is relegated to the milling engineer, who is generally in the employ of a mill-building firm. Nor is the reason for this transfer of duty hard to find, for to be able to successfully make the diagram for a mill and insure its starting from the word go, requires an experience and knowledge of milling facts not be gained by working in one or a dozen mills. As milling machinery has grown more complicated and milling methods more intricate, so has the field of mill building widened, and the same man is called upon in the same day to design mills and diagram milling systems for widely separated localities. He is the more fitted for his work because of his enlarged opportunities for gaining new facts and adding to his stock of milling knowledge.

And yet it is not uncommon for a mill owner, when about to build or remodel his mill, to place more faith in the opinions of his miller, based upon the experience gained in a single mill, than in statements of fact made by the engineer who built a hundred successful mills. Not only this, but the mill builder is sometimes asked to submit to the injustice of being held responsible for the operation of the mill, and to guarantee its results, while his advice as to equipment and operation is flatly disregarded. It occasionally happens that when his advice is followed, the miller will, when the mill is being built and after it is started, criticize it unmercifully, simply because his ideas have not been followed. It is true that millers have much to complain of in their treatment at the hands of mill builders, but it is also true that mill builders have equal reason for complaint on account of their treatment at the hands of some millers. In fact there appears to be a feeling of distrust and lack of confidence on both sides; however, millers in general would have little to complain of if they would confine their dealings to strictly responsible builders, whose past reputation for doing good work is the best possible guarantee that they will give value received for the money paid them.

THE NORTHERN SUMMER RESORTS

of Wisconsin, Minnesota, Iowa and Dakota, not forgetting the famous Excelsior Springs of Missouri, are more attractive during the present season than ever before.

An illustrated Guide Book, descriptive of a hundred or more of the choicest spots of creation, on the lines of the Chicago, Milwaukee & St. Paul R'y, will be sent free on application to A. H. V. CARPENTER, General Passenger Agent, Chicago, Ill.

NEWS. — The Batesville Flouring Mill and Manufacturing Co., has been organized at Batesville, Ark., and will build a seventy-five barrel roller flour mill. Capital stock, \$25,000.

BURNED—Isaac Myers' mill and elevator at Lacona, Ia.

BURNED—June 15, the Regina mill, Regina, Man. Loss \$14,000.

BURNED—Wilson & Rowe's mill at Punxatawney, Pa. Loss \$11,000.

N. D. Comstock, of Comstock & Gaveny, millers at Independence, Wis., is dead.

It is now reported that the Winona Mill Co. will not rebuild—at least not this year.

At Tacoma, Wash., June 16, the Tacoma Cracker Factory was burned. Loss, \$32,000.

A \$10,000 flour mill is being built at Nunica, Mich., by the the Patrons of Husbandry.

BURNED—S. L. Hendrickson's mill at Orangeville, O. Loss \$22,000; insurance \$11,000.

Samuel Raesby has let the contract for a new forty barrel roller mill at Portland, Pa.

DEAN G. PETERSEN, of Webster, S. Dak., will build a 30-barrel mill on the short system.

The Winona Mill Co. whose flouring mill at Winona, Minn., was recently burned will rebuild at once.

THE Smart elevator at Platteville, Wis., was recently destroyed by fire, caused by a lightning stroke.

The Wapello Milling Co., of Wapello, Ia., will have their 100 barrel mill in readiness for operation about Aug. 15.

Boardman & Ferguson, millers of Honeoye Falls, N. Y., have dissolved. H. E. Boardman continues the business.

It is estimated that the wheat crop of France will amount to 320,000,000 bu., or about 20,000,000 more than an average.

Wilcox & Hyde, of Joliet, Ill., have sold their flour mill to Norton & Co., of Chicago, who will make improvements costing about \$100,000.

Kraemer Bros., of Virden, Ill., will build a 150 barrel, full roller, flour mill at Caldwell, Kan. The city donates them a site and \$2,000 cash.

The Quanah Roller Mill Co., of Quanah, Tex., has been incorporated with a capital stock of \$11,000 and will erect a flouring mill of 100 barrels capacity.

Flour shipments from Minneapolis from Jan. 1, 1890, to July 8 aggregate 3,052,120 barrels against 2,529,505 barrels for the corresponding time last year.

Levenhagen & Petrie's mill at Mishicot, Wis., was burned on the morning of July 7. Loss, about \$12,000; insurance, \$5,500 Cause supposed to be incendiary.

The business men and farmers of Clyde, Kas., are raising a cash subscription of \$1,500 to be donated to any responsible party who will build a flour mill there.

Articles incorporating the Corydon Mill Co. at Brandenburg, Ky., have been issued to J. L. Moreman, Z. T. Funk and Edward Gwartney. Capital stock \$12,000.

The City Mills Co. has been incorporated at Columbus, Ga. Capital stock \$100,000. W. L. Tillman, President; Thos. Salisbury, Secretary. Capacity of mill 500 barrels per day.

At East Saginaw, Mich., June 13, the Central Flouring Mills, owned by the Smith estate and operated by John Osborne & Son, were destroyed by fire. Loss, \$12,000; insurance, \$8,000.

The Carnak Oatmeal Co., of Carnak, Ill., has been incorporated by L. T. Bray, Christian Rowland, Chas. W. Frank and others, for the manufacture of oatmeal. Capital stock \$15,000.

The Fort Smith Milling Co. of Fort Smith, Ark., will increase their capacity from 125 to 250 barrels per day. They are building a large warehouse 25x100 feet for the storage of their products.

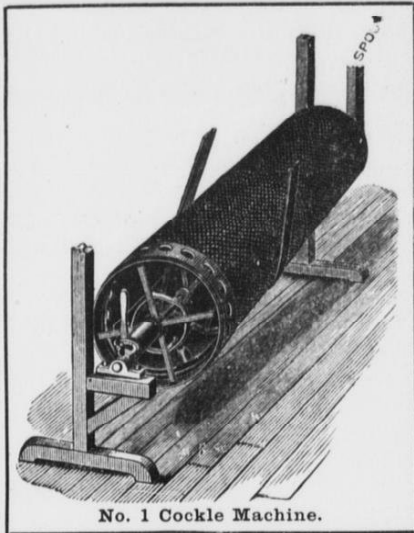
Frank Guthrie, of Gallatin, Tenn., contemplates building a roller flour mill of from 100 to 150 barrel capacity and a grain elevator of from 50,000 to 100,000 bushels capacity, plans and estimates for which are desired.

THE Cracker Combination known as the N. Y. Biscuit Co., has commenced work on a new cracker factory in New York City which will cost not less than \$1,000,000, and will use over a thousand barrels of flour per day.

At New Memphis, Ill., June 10, a spark from a locomotive on a Louisville & Nashville freight train set fire to the grain elevator, and the building, together with 2,500 bushels of corn, was burned. The elevator was the property of the Crown mills of Belleville. The grain belonged to Frank Ernst, also of Belleville. Loss about \$2,000; insurance \$1,200.

ATTENTION, MILLERS!

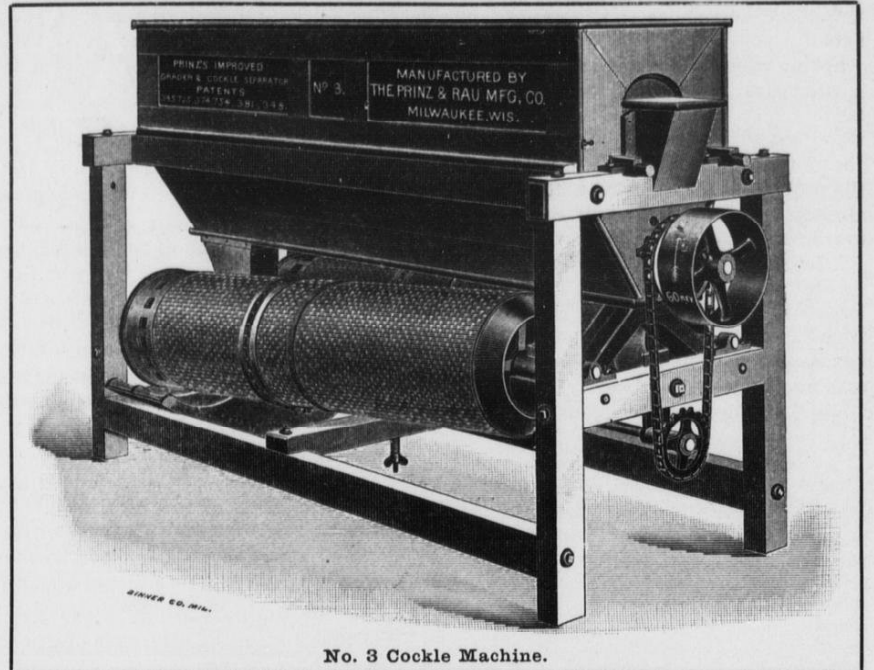
THE Prinz Patent Improved Cockle Machine



No. 1 Cockle Machine.

THE LATEST —AND— MOST IMPROVED

on the market, built in the most substantial manner, with **Cockle Reels** made of **Sheet Steel**, which will outlast five or six zinc reels, and with the new and an Improved indentation, patented by F. Prinz, will do more and better work than any other machine.



No. 3 Cockle Machine.

HUNDREDS NOW IN USE.

WRITE FOR CIRCULARS AND PRICES TO

THE PRINZ & RAU MFG. CO., - MILWAUKEE, WIS.

(From Our Regular Correspondent.)
OUR ST. LOUIS LETTER.

THE topic of greatest interest here is the fight going on between the Texas railways and millers and the millers of Missouri and Kansas before the Interstate Commerce Commission. It is not necessary to explain the situation as that has been done in a previous letter. Suffice it to say that the millers have sent on to Washington their attorneys and witnesses, to appear before the Commission on July 8. It would seem that a victory for the Missouri and Kansas millers will be the outcome of the fight if we are to judge from the Commission's report of June 7, which provided that wheat and flour should be rated not more than 15 per cent above the rate on corn and oats. With the rate on the latter at 25c flour could be shipped at 28c on the 100 lbs. as against the now exorbitant rate of 51c. Attorney F. N. Judson appeared for St. Louis before the Commission on Tuesday, July 8, and, in his letter to Mr. Alex. Smith, says that the outlook seems very favorable. That despite the 100° of heat indicated by the thermometer, the two members of the Commission, who were present, listened attentively to arguments and witnesses. The old argument of the railways that the cost and risk of hauling flour were greater owing to leakage, etc., were repeated together with the arguments from the Texas millers of needed protection. But why other States should suffer for the sake of Texas was a problem they failed to solve. Other arguments on double and single railway hauls were given but as the Commission was to hear another case that same day it closed the examination by directing Mr. Judson to file his brief for the prosecution within thirty days and allowed the defendants thirty days in which to file their brief in answer when the matter will again be taken up.

And again the proposition of buying up the Planters House property as the site for the new Exchange building came up for a vote before the members. Although it had been acted on favorably by the Real Estate committee, it managed to meet with a crushing defeat.

And now to a complaint of "cheat" by a leading miller. Michigan No. 3 and No. 4 wheat, when cleaned of "cheat" is up to No. 2 grade. Recognizing this fact a miller set to work and instead of buying No. 2 at 89c

bought Nos. 3 and 4 wheat, at 85c and 81c respectively, mixed and cleaned it, so that in the end he got No. 2 wheat for 83c but at the expense of twenty-five pounds of "cheat." This gave him a profit of 30c minus the twenty-five pounds of "cheat;" twenty-five pounds of "cheat" at 83c gives a loss of 34c or a total loss of 4c. Not calculating on what the "cheat" was worth, the miller immediately concludes that he is losing on the deal. A friendly neighbor, however, carried the calculation a little farther and brought out a happier conclusion. With "cheat" at 50c per 100 pounds, the twenty-five pounds extracted from the wheat was worth 12½c. This added on to the former result gives a profit of 8c. Who can complain of this?

Most of the visitors from the vicinity around St. Louis complain of the poor crops. They had estimated a crop of 75 or 80 per cent, or even of 90 per cent, in favored localities but now that the grain is threshed out they have realized a loss of 10 to 15 per cent, over their former estimate. The receipts of wheat lately have fallen much below the average. It is all due to the roustabouts on the grain packets, who, on account of the heat, have struck for higher wages. For the last week receipts have amounted to 71,450 bushels as against 153,000 bushels for the corresponding week last year. As respects prices I quote the following from the *Market Reporter*: "No. 2 Red buoyant and higher, advancing day after day, so that yesterday's (July 11) prices show 2½@3c improvement over rate current on Thursday of last week; it sold moderately to millers on Monday and yesterday, but went mainly into accumulative hands otherwise, if we except a round export sale of 100,000 bushels (at 88c) on Tuesday." No. 2 Red is now bid at 89½@89¾c.

Speaking of wheat reminds me of our prize State grain inspector, Jasper Burks. The utter inefficiency of his corps of grain inspectors is too well known to be spoken of but the point to be touched on now is the adoption of new wheat grades. Wishing the co-operation of the Exchange, Mr. Burks notified President Kauffman that on July 2d the State inspectors would meet to consider the adoption of new wheat grades. Owing to the circumstance of the present time of year Mr. Kauffman declined to co-operate until after July 15th. The meeting was held nevertheless and the result has been seen in the form of an advertisement in the daily papers of the new adopted grades. Here is a portion of this notice:

STATE OF MISSOURI, OFFICE OF RAILROAD and Warehouse Commissioners, City of Jefferson, July 8, 1890.—Notice is hereby given that the change of grades and the new ones established for the inspection of grain in this State have been made, to take effect on and after July 28, 1890, as follows:

GRADES CHANGED—WHEAT.

No. 1 RED—To be bright, sound, plump, dry and well-cleaned red, or red and white mixed winter wheat. If mixed, must not contain over one eighth white wheat and weighing not less than 61 pounds to the measured bushel.

No. 2 RED—To be sound, well cleaned, dry red, or red and white mixed winter wheat. If mixed, must not contain over one-eighth white wheat and weighing not less than 59 pounds to the measured bushel.

No. 3 RED—To be sound, reasonably-cleaned red, or red and white mixed winter wheat below No. 2 Red, weighing not less than 57 pounds to the measured bushel.

No. 4 WINTER—To be red, white or mixed, thin or bleached winter wheat, reasonably sound and unfit to grade No. 3 Red.

HARD WINTER WHEAT.

No. 1—To be sound, dry and clean, hard winter wheat; and to weigh not less than 60 pounds to the bushel.

No. 2—To be sound and reasonably clean hard winter wheat; and to weigh not less than 58 pounds to the bushel.

No. 3—To be sound and reasonably clean hard winter wheat; and to weigh not less than 55 pounds to the bushel.

No. 4—To be reasonably sound, thin or bleached hard winter wheat unfit to grade No. 3 Hard.

WM. G. DOWNING,
J. B. BREATHITT,
T. J. HENNESSEY,
Commissioners.

JAMES HARDING,
Secretary.

Flour is at last making a small advance and is from 10c to 15c higher than this time last week. High grades were in strong demand at country points, low grades having the advantage in local markets. The last eight days' receipts amount to 16,747 barrels as against 10,445 barrels of four days of last week. That the mills are working but poorly will be easily seen when it is known that 127,850 barrels foots up the total output for the past four weeks, one week's total being only 19,250 barrels; when the mills of this city, to say nothing of mills outside the city but owned by St. Louis firms, have a capacity of 9,550 pounds daily, such a showing as 19,250 does not speak well for trade. Quotations on flour are: XXX, \$2.15@2.30; family, \$2.40@2.55; choice, \$2.75@3.00; fancy, \$3.55@3.70; extra fancy, \$4.25@4.40; patent, \$4.70@4.85. Freight rates per barrel to the principal flour points are: New York, lake and rail, 35c; all rail, 52c; New Orleans, by boat, 25c; Memphis, by boat, 20c; Boston, 10c more than New York rates, Philadelphia 4c less than New York rates, Baltimore 6c less than New York rates.

MILL NOTES.

Mr. Henry C. Yaeger's mill at Carlinville, Ill., has just been fitted up with the Cornelius Internal System.

Kauffman's Bethalto mill has had six Richmond scourers put in.

Geo. H. Plant's Roller A is in part being remodeled by the Todds & Stanley people, who are placing the Cornelius system in it. An addition of four Richmond scourers has also been made.

The Todds & Stanley Co. are about to remodel a mill in Missouri, two in Illinois and one in Arkansas.

Owing to a slight break Duncan Kehlors' mill was laid up for several days this month.

A city office for the Yaeger Milling Co. has been established in Chamber of Commerce.

C. B. Cole and J. B. Cole, of this city, have sold out their interest in the Star and Crescent mill of Chicago.

PERSONAL.

Annan, Burg & Smith managed to capture the first car of new winter wheat flour. On "call" it sold for \$4.25 a barrel to J. F. Imbs & Co.

Louis Fusz sailed for Europe last week. He takes with him his wife and son.

John W. Kauffman, president of the Exchange, will also spend the summer months in Europe.

Jas. H. Wilson was a recent visitor. He hails from Glasgow.

Among the visitors on 'change for the past week were Messrs. Campbell, Henry Hutch, Chas. Friedman, C. H. Seybt, and J. Reichert.

WALTER HOWARD BAIN.

St. Louis, July 12, 1890.

WESTERN GRAIN DEALERS ORGANIZE.—About thirty prominent men of Kansas and representatives from Nebraska and Illinois met at Topeka on July 2nd and completed the organization of what will be known as the Kansas and Nebraska Grain and Elevator Men's Association. For some time past the elevator men and shippers have been heavy losers by shortage in grain at terminal points, and the object of forming this association is to make a united effort to remedy the evil. At the meeting one dealer said his shortages for several months had averaged forty bushels a car. The officers elected are: President, Mason Gregg, of Lincoln, Neb.; Vice-President, Frank Lowe, of Council Grove, Kansas; Secretary, W. T. Carwood, of Clifton, Kansas; Treasurer, O. H. Cooper, of Humboldt, Neb.

BOILER FURNACES*.

By W. KILVINGTON and ALEX. TAYLOR.

RECENTLY the thickness of the plates forming the furnaces of marine boilers has been increasing, but they have now got to a thickness beyond which a good many engineers hesitate to go, and therefore at this time a discussion of the question whether to go farther or to stop will be both opportune and valuable. Not very many years ago a plate of $\frac{1}{2}$ in. was considered to be the thickest that could, or at any rate should be used for a furnace, and the supplement to Spon's "Dictionary of Engineering" says that plates of as great a thickness as $\frac{1}{2}$ in. have been used; but this information is accompanied by a warning that serious results may be expected to follow. It is some time since any hesitation was felt in using $\frac{1}{2}$ in. plates, and at present very few engineers, the writers believe, object to plates $\frac{1}{2}$ in. thick, but they think that even this thickness may be greatly increased, and one of their chief objects in writing these short notes is to elicit the opinion and experience of the members of this Institution regarding the employment for high-pressure marine boilers of what would be usually designated thick cylindrical furnaces.

The writers have advocated and employed from the very commencement of the introduction of high-pressure triple-expansion engines for marine purposes plain cylindrical furnaces, that is, furnaces without corrugations, rings, or change of form and section of any kind; and they are able to assert, after years of experience of their use, that such furnaces have given no trouble, and have been in every respect satisfactory up to a thickness of $\frac{1}{2}$ in.; and their confidence is such after this experience that they would not hesitate to still further increase the thickness if the circumstances of the case required it, and they now ask (and this is the essence of the whole question) if there is any proof and example of a case where a furnace has failed in any way merely on account of its thickness being too great?

This question is very important at this time and to this district, because here a large number—we believe the larger proportion of furnaces for boilers built on the Tyne—are now made of the "plain" description, and because the Board of Trade demur to pass furnaces if they are made of a greater thickness than $\frac{1}{2}$ in. The reason given by the Board of Trade for this is that they have no proof that the temperature in the thicker plates is not so much raised as to reduce the factor of safety. We think that this is not the case, because of the deductions to be drawn from experiments and formulæ to be presently referred to, but especially from the fact that we have had thicker furnaces in use for the last eight years at sea which have not changed in form, and are in every way effective to-day. The writers have knowledge and complete reports concerning furnaces in boilers of 160 lb. pressure, made of about $\frac{1}{2}$ in. plate, which have now been worked continuously at sea from three to four years.

These furnaces are steel. If they had been iron, which is more subject to lamination, some of them probably would have failed from this cause. The reason for the failure of a laminated plate will be referred to further on.

The important points to investigate in connection with furnace plates would appear to be (1) the influence of the thickness on the transmission of heat through them, and (2) the effect of this thickness in raising the temperature of the interior of the plate. With regard to transmission of heat, it can be shown that the sum of the resistances at the two surfaces is so much more than the resistance to conduction through the body of the plate

itself, that any thickness likely to be required to furnish strength due to compression or length can have little effect, and certainly would not be prohibitive or dangerous. The writers' experience of hundreds of what would be called by some engineers very thick furnaces, confirms this statement.

Rankine, in his work on the steam engine, gives the total thermal resistance of a plate

$$-(o^1+o)+sx,$$

when $(o^1 \times o)$ is the resistance of the two surfaces, and s the internal resistance of the plate to conduction of heat.

We have given

$$\frac{1}{(o^1+o)-\frac{1}{A\{1+B(T^1-T)\}}}$$

when $s = .0043$ for iron,

x —thickness in inches of plate,

$A = 1.58$ for dull metallic surfaces,

$B = .0037$ " " "

and T^1 and T —the temperatures of the fluids in contact with the two surfaces.

The writers propose to take $(T^1 - T) = 3000$ deg., which is a much larger value than is likely to obtain in most marine boilers. But this will be referred to again.

If we compare, according to the above formulæ, the resistance of $\frac{1}{2}$ -in. and $\frac{3}{4}$ -in. plate, we find that the total resistances are as 550:555. That is to say, that by adding $\frac{1}{4}$ -in. to the thickness of a $\frac{1}{2}$ -in. plate the resistance it offers to the transmission of heat is only increased about 1 per cent. This shows how little mere thickness can have to do with this part of the question. But this was well known long ago, for Rankine says:

"The external thermal resistance of the metal plates of boiler flues and tubes, and other apparatus used for heating and cooling fluids, is so much greater than the internal thermal resistance, that the latter is inappreciable in comparison; and consequently the nature and thickness of those plates has no appreciable effect on the rate of conduction through them."

And he also states that the results of experiments on evaporative results of actual boilers justify the disregard of the effect of thickness on the rate of transfer of heat.

Mr. Isherwood made some experiments in 1867 on the transmission of heat through plates varying from $\frac{1}{2}$ in. to $\frac{3}{4}$ in. in thickness where one side of the plate was exposed to steam and the other to water, and he states that the thickness did not measurably influence the result. It is true that those plates are not very thick; but the variation in thickness is very considerable, and as far as the experiments go they afford a remarkable confirmation of what has just been stated. In the instance here given of course the plates were clean, that is, they had no "scale" on them, but it is probable that scale would affect the action of a thin plate in the same way as a thicker one, and apparently they are on a par in this respect. But heating and distortion due to scale and many other causes is often only local, that is over a small surface; and in case of any distortion of this kind a thick furnace would probably be much safer than a thin one, as the plate would be stiff enough to resist any dangerous change of form adjacent to the over-heated portion; besides the stiffness would check the distortions of the over-heated portion itself, owing to the support it would afford.

There can be little doubt that so far as the quantity of heat transmitted through the plate is concerned, the thickness can be still further increased, but the increased temperature of the plate itself due to this increase has yet to be considered. The writers at once admit that this part of the subject, although much more important than the first, is not so clear, and the investigation of it much more difficult. Considerable thought has been bestowed, therefore, on this point, and the writers hope that at least an approximate determination of the temperature in the

plate has been arrived at by the method now to be explained.

Above is a calculation of the total increase of resistance to transmission of heat for a $\frac{1}{2}$ -in. as compared with a $\frac{3}{4}$ -in. plate; but the writers think that the employment of a $\frac{1}{2}$ -in. plate would be quite safe for a boiler furnace and the figures which follow refer therefore to a plate of this thickness. Taking the same formulæ as referred to in that calculation for $\frac{1}{2}$ -in. plate and 3000 deg. as the difference of temperature between the fire in the furnaces and the water in the boiler—which we may call the head of temperature which is available to cause the flow of heat from the gases to the water—it is found that:

$$o : s : o^1 :: 506 : 43 : 17-2682 \text{ deg.} : 228 \text{ deg.} : 90 \text{ deg. (sum=3000 deg.)}^{\dagger}$$

That is that the head of temperature between the furnace gases and the inside surface of the furnace plate (that is the side exposed to the fire) is 2682 deg.; and the difference of temperature between the inside and outside surface of the plate itself is 228 deg.; and the head of temperature between the outside of the plate and the water in the boiler is 90 deg. This calculation—as will be seen at once—entirely depends upon the assumption that the head of temperature will be proportionable to the resistance, which seems a reasonable assumption, and which it is believed cannot be far from the truth.

Taking this, it follows that the mean temperature of the plate, if we take the temperature of water due to steam of 160 deg. pressure, will be $370+90+\frac{1}{2}(228) = 574$ deg., which would be the temperature somewhere about the middle of the thickness of the plate; but even if, as might be urged, the extreme inside temperature should be taken, then it is still only 688 deg.; and since, we believe, iron up to 600 deg. is not deteriorated in strength, it may be said that a plate of this thickness is within the limit of safety, as any decrease of strength at 688 deg., if it takes place at all, must be very small.

If this calculation is true, then the temperature of a furnace plate is much nearer the temperature of the water in the boiler than that of the heated gases in the furnace, due to the very great resistance at the surface in contact with the light heated air and gases. The relative resistances here given are quite confirmed by observations on the reverse process of cooling heated metals in gases and in liquids.

The failure of a plate having a laminated portion in it is now readily explained, for that portion of the plate which is on the fireside being bounded on two surfaces by air or gas offers so much resistance to the escape of heat on the side furthest from the fire that the plate is heated to such an extent as to expand into an arched shape, forming what is called a "blister." This was an occurrence, unfortunately, only too frequent when iron plates were employed.

It may be surmised here, that it is probable steel plates will offer less internal resistance to the transmission of heat and will therefore be less raised in temperature, on account of their homogeneous nature, than was the case with iron plates, which had to some extent a fibre running across the direction of transmission of heat, and therefore most likely unfavorable to it.

In conclusion the writers wish to point out that they have in their calculations taken the temperature of the fire as high, or even higher than is likely to be got in a marine boiler furnace as at present worked. If we calculate the transmission of heat to the water in a boiler working at 160 lb. pressure, and if the difference of the temperature at the furnace was 3000 deg., and the temperature of the

chimney gases 670 deg., we find that each square foot of heating surface transmits 16,650 units of heat per hour, and as each pound of coal burnt, supposing a total value of 14,500 gives under these conditions of working 12,000 to the boiler, then for each foot of heating surface we should have to burn $\frac{16,650}{12,000} = 1.38$ lb. of

coal, and as a common proportion of heating surface is 30 square feet per foot of grate, we should have to burn nearly 42 lb. of fuel per foot of firegrate to maintain these temperatures. This is more than double the quantity almost ever burnt, therefore the case that has been taken is an extreme one.

Of course whatever reasons can be adduced for thickening up furnace plates applies equally to the plates of the combustion chambers, and the importance of the whole subject, especially in view of the probable further increase of working pressure in marine practice, must be very great to an Institution like this, and therefore merits its earnest consideration.

VIEWS OF OUR FOREFATHERS ON RAILROADS, ETC.

IN 1834 a convention of farmers and stable-keepers was held at Albany to protest against the further development of railroads. They declared, as the opponents of Stephenson had done, that if railroads were allowed to obtain a foothold, turnpike roads would be deserted and grown up with grass; country inns would be ruined; and the race of hostlers and coach-drivers would be wiped out; the value of horses would be greatly depreciated, if indeed the breed did not become extinct.

Frightful locomotives, emitting a breath more poisonous than the famous dragons of old, rushing and tearing through the country, would prevent cattle from grazing, and hens from laying. The terrible smoke would darken the sun. Crops would cease to flourish.

Sparks would set fire to barns and haystacks. In short, the pursuit of agriculture would be impossible. Land would be thrown out of cultivation; land-holders and farmers reduced to beggary. Cows would refuse to give milk. Sheep would starve. The poor rates would be increased in consequence of thousands of persons being thrown out of employment, and all that a few manufacturers and shippers might enjoy a gigantic monopoly in railroad traffic.

In the sixteenth century many improvements were made in the art of dyeing. It was found that cloth could be colored, not only better, but cheaper, with indigo brought from the East, than with the native dyes according to the older methods. But there were many farmers in France and Germany engaged in the cultivation of pastel, a plant then largely used in all the dye-houses of Europe. They got up a farmers' panic and developed a tremendous opposition to indigo. The enemies of indigo well knew how much prejudice attaches to a name, and so they declared indigo to be "a pernicious, deceitful, eating and corrosive substance." They called it the "devil's dye." They demanded legislation, and they got it.

An imperial edict was issued against indigo in 1634 on the ground that by its use trade in pastel was lessened, dyed articles were injured, and money carried out of the country." In Nuremberg they made a law that every dyer should take an oath not to use indigo. Henry IV. of France, in 1609, ordered that the punishment of death should be inflicted upon all who used the "false and pernicious drug called indigo."

ALL persons desiring to reach the entire milling and grain trade of America, by circular or otherwise, should obtain a copy of CAWKER'S AMERICAN FLOUR MILL AND GRAIN ELEVATOR DIRECTORY FOR 1890-91.

* Paper read before the North-East Coast Institution of Engineers and Shipbuilders.

[†] In some experiments the writers made they found that the resistance to transfer of heat from a metal surface into air to be 30 to 35 times the resistance into water. Taking the least of these $o+o^1$ are proportioned 30:1.

TRUTH VS. FALSEHOOD.

The Champion Liar Called Down by S. H. Seamans.

EDITOR UNITED STATES MILLER:—

I have before me a copy of pamphlet entitled "The National Association, a Review of its History, etc." It has the imprint of The D. H. Ranck Publishing Co., Indianapolis. This pamphlet was circulated quite freely on the train and at the Minneapolis convention. I glanced over its pages briefly, while at the convention, recognized the ear-marks of its sore head compiler, and gave it no further thought until my attention was again called to it a few days since by a friend, with the remark that it was a shame to have this untruthful (he did not use the word "untruthful") document put in circulation without a protest and showing up of its misstatements. I mildly protested that I was now a private citizen, trying to give all my time and attention to my regular business. However, I promised to review this work in the interest of my milling friends and show up the "hyena in it."

To get out three or five hundred of these pamphlets cost money, and somebody had to pay for their issue. It did not come out of the treasury of the Association, I know of my own knowledge. If the Association had wanted its history published, it would not have selected the author of the aforesaid pamphlet, but a truthful gentleman, one who would have faithfully represented the work of the Association and its officers. This "History" does not, but is simply a libel upon the Association.

If the Millers' National Association did not pay for this work, why so much interest taken by the philanthropic gentlemen at their own expense to furnish such an elaborate work to the millers of the country? The motive for its publication is manifest in every page.

On page one we are told that "it is interesting how rapidly this power was dissipated when selfish motives and oligarchic methods changed it from an association to a close corporation," etc. It goes on to describe the meetings of the association from '73 to '77 under the head of an organization "upon the broadest grounds," but my reading fails to show one single result of importance accomplished during these four years, and not until it was made what this pamphlet terms, "a close corporation" were any benefits secured to the millers.

The "selfish motives and oligarchic methods" referred to are simply "bosh," and I make this broad statement and challenge proof to the contrary:

That no association ever organized has done the amount of work and accomplished the amount of good for its members, at any cost, that was accomplished by the Millers' National Association from 1877 to 1890; and I will add further, that in all the work of the committee during that period there never was a move made by the committee or any member of it that was not in the interest of the association to the fullest extent according to the information upon which the committee had to base its judgment. I was present at every meeting of the committee but one from May 1887 to June 1890; and there never was a time when every member of that committee would not gladly have been relieved of the work and anxiety imposed upon him by reason of his membership on the committee.

Page 4. "This was adopted, and Mr. Christian and his appointees were constituted an executive committee in accordance therewith." I do not know where they find this "history." It is, however, untrue. Mr. Christian had nothing whatever to do with the selection of the executive committee. Members from each state in attendance at Buffalo, elected their own representative upon the executive committee. Wisconsin had five representative at that convention. We held a meeting and their choice fell upon myself as the Wisconsin representative upon that committee, and not by Mr. Christian's appointment.

Page 5. "It will be seen that New York, Minnesota and Wisconsin actually drew out of the Millers' National Association treasury \$4,743.60 in cash more than they paid in, by virtue of the allowance of the sub-executive committee interested in behalf of their respective states. An action which the construction of the committee will best explain."

In reply to this I have to say, not one dollar was ever paid from the Association's treasury to any state, but every state that had paid out money for defenses that were of a general character and for the general good was allowed such payments on its future assessments; and I have yet to hear the first complaint from any miller or any state that this arrangement was not perfectly fair and equitable, notwithstanding the insinuation as above. And right here let me ask your "historian," he being cognizant of the fact, why he did not also state, as part of this

record, the adoption of the following resolution offered by Mr. Seybt, of Illinois.

"Resolved, That a committee be appointed consisting of one member from each state, who shall investigate the receipts and expenditures of the treasury of the National Association, and embody the same in a formal report, and that each secretary of the State Association shall be furnished as many copies of the report as may be required to satisfactorily acquaint all the Millers of his organization with the amount and nature of the money transactions of the National Treasury."

Mr. Kreider, of Illinois, chairman of the special committee, as per resolution above, submitted the following report:

"Your committee have consulted with the Treasurer, Secretary and Executive Committee of this Association, and listened to statements from them and from attorneys who are assisting in our patent cases; and have examined statements of the expenditures of money made on behalf of the Association, and we are satisfied the money is being judiciously expended, and the business and interests of the Association are having suitable and necessary attention."

Your committee will add that we have examined carefully the condition of the litigation and defense against the Cochrane claims. The investigation and preparations necessary to our complete defense have involved a large expenditure for models, diagrams, witnesses, traveling and other expenses. Your committee state, after investigation, that we believe that the evidence has been economically, judiciously and thoroughly prepared."

Committee: E. C. Kreider, chairman, Ill.; C. H. Pettit, Minn.; Homer Baldwin, Ohio; Jacob Hammond, Iowa; J. A. DeWaar, Mo.; R. H. Hotchkiss, Wis.; J. F. Durston, N. Y.; J. O. Norris, Md.; H. A. Hayden, Mich.; W. Hurt, Va.; Elam Clark, Neb.; Frank Goodenow, Kan.; D. Keefer, Ky.; J. A. Thompson, Ind."

The above report was adopted.

At Indianapolis, 1878. "Here the wedge was driven in farther and the power of the members further weakened." How weakened? These conventions were mass conventions and every member had a chance to vote on all questions and the vote of a twenty-five barrel miller counted just as much as a five thousand barrel miller, for there never has been a vote taken at any convention from 1870 to date, where a capacity vote was called for; and no member has ever made a protest or complaint of unfairness as to any vote taken. Such being the fact, what right has "Historian" to complain?

Page 6. "In a short time all millers in arrears for any portion of their assessments were cut out from membership and protection, and the door was shut on new members only as they should pay the amount heretofore paid by older members." True, and why should they not do so? They were duly notified and plenty of time given them to decide what was for their interest. If a man joins a lodge, society, club, or any organization, he must either "pay up or get out." There was neither a wrong or a hardship in this. These were "war times." The enemy had his knife at our throats. "It was no time to parley; and to use a slang phrase. It was either 'put up or shut up.'"

"On the last day of the convention and after these matters had been run through the caucus had passed by a gag rule, and as many millers shut out as possible," etc.

Our "historian" being on the outside about this time is a trifle mixed in his data; but to reply to his statement will say, no millers were shut out who paid their dues or assessments. Every miller was wanted in the association who would come in or stay in. To say they were "not wanted" or "were shut out" is a ridiculous statement that carries with it its own denial.

"In June, '81, the same committee surrendered into the hands of the Consolidated Purifier Co., all maps," etc., etc. This is not true. No maps or drawings were surrendered to the Consolidated Co. The committee did not settle with the Purifier Co. for \$6,000 or any other sum. The mass convention in June '81 made the deal with the Cochrane gang on the recommendation of a part of the committee; and as Historian has to this day seen no report of this meeting; it must be for the reason that about this time he took no interest in the affairs of the association, having had an attack of the regular "Michigan fever and ague," then prevailing in that state, or could not have read the milling papers carefully. He says the sub-executive committee agreed to abandon all defense litigation and to pay out of the treasury of the association the sum of \$6,000 as indemnity for injuries done the company! This was done after the magnificent sacrifices of the millers of the country, and after these scattered millers had paid not only the cost of defense, but actually had given states represented by the sub-executive committee nearly \$5,000 more than they had paid in. After winning a victory its results were bartered for the meager return of a service already won by the force of law. Ananias would have blushed to make such statements.

Page 7.—"The sub-executive committee shall execute the full power of the whole executive committee. They shall also elect a secretary and treasurer, who shall be subject to their control." Right there is where "Historian" "lost his grip," and his head, and no further act of the association has ever been worthy of the least consideration in his estimation.

Hereafter no miller shall be admitted to membership in the National Association unless by a majority vote of the sub-executive committee. "Members of state associations are to be admitted to the National only on approval of said committee, who shall have power to prescribe in each individual case the amount to be paid as an initiation fee."

The above claims to be a quotation taken from Section 3 of the constitution adopted in 1879. This part of Section 3 reads as follows:

"And no new members shall be hereafter admitted without paying all assessments theretofore paid by the original members, including the assessments made for purposes of MUTUAL defense under the organization heretofore existing."

PROVIDED, That the executive committee shall have full power to admit as members any mills NOT BENEFITED OR PROTECTED by the expenditure up to January 1, 1879, on such terms as they may deem EQUITABLE, and also, to REJECT any applicants for any cause which they may deem sufficient."—O truthful historian!!!

"Prior to May 15th, 1879, the membership had enrolled nearly one thousand names, representing nearly four thousand run of stone." Why not be a little more exact, Mr. Historian? You had the data before you. It would have been just as easy to say that the highest number enrolled, and that during the height of the Cochrane fight, was seven hundred and fifteen mills or firms operating thirty-two hundred and fifty runs of buhrs. You only exaggerated about thirty per cent.

"The National Association, having thrown itself into the hands of three men, who had done no more than any of the other 1,000 men; having sold its strength and given its resources in favor of a defeated enemy; having barred out all its membership save the few whom this council of three choose to select, CEASED to be an association and became a nonentity, so that in less than four years its membership declined to less than one hundred and fifty, and the income had decreased so that current expenses could only be met by reducing the secretary's salary."

The above statement contains no less than five falsehoods. It had not thrown itself into the hands of three men." It had not "sold its strength and given its resources in favor of a defeated enemy." It had not "barred out all its membership save a few whom this council of three chose to select," because no applicant was ever refused admission who had a clean record, so far as infringements were concerned. It never "ceased to be an association and became a nonentity, so that in less than four years its membership declined to less than 150." [At no time has the membership in Wisconsin and Minnesota alone been as low as this figure.] At no time did the income "decrease so that current expenses could only be met by reducing the secretary's salary." On the contrary the last assessment prior to 1890 was called in 1883, and the response was sufficient, with the interest items collected, to carry the work of the association to 1890, without any further calls upon its members, and at all times plenty of money in the treasury.

The salary of the Secretary was reduced upon his own resolution, when the work required of the Secretary had become reduced in its details so that an assistant was unnecessary except occasionally. It was further reduced when it was decided to abolish the crop reports and was satisfactory to its Secretary—if not to Historian.

Page 8.—"The eighth annual meeting was held in Chicago, June, 1881. The same officers were at the head. [Historian was out]. It was noticeable as consummating the sell-out of the Millers to the Cochrane people, and the Denchfield claimants, after they had won victories over them." The Denchfield suits were carried to the United States Supreme Court and defeated; the Denchfield people being mulcted in a heavy bill of costs. The Cochrane suit was compromised and settled by the edict of a mass convention and by a unanimous vote, with one exception.

"In 1883 a meeting was held in June at the Grand Pacific Hotel, Chicago. Just thirty-two were present." Not being quite a close enough corporation it took advantage of George Bain's financial difficulties to discharge him from further service as president, instituting Mr. Christian, of Minneapolis, in his stead." As I read this statement I was somewhat taken aback at the audacity of "historian" in making such a statement, and hardly know which to admire the most his "cheek" or his principal accomplishment. As the entire proceedings

of the meeting are published in the North-western Miller issue of July 6, '83, anyone so desiring can acquaint himself regarding this meeting. The fact is that the attendance was more than double the number stated above, besides the usual number of machinery and newspaper men; and the meeting itself was full of business, notwithstanding the fact that a delegate convention had been held in Cleveland, Ohio, the last day of January preceding, which was also well attended. As to Mr. Bain being discharged, it was well understood that he was not a candidate for re-election, and was in Europe at the time this convention was held.

The above reference to the meeting in 1883 will apply to all following meetings which "Historian" has undertaken to describe.

The whole pamphlet is a tissue of falsehood from beginning to end; and as I have been revising it in writing this article, I am more and more surprised that any reputable journalist would allow his name to be connected with such a compilation of glaring misrepresentations, and can only account for it on the supposition that he was misled, and did not look up for himself the statements herein set forth.

S. H. SEAMANS.

KANSAS MILLERS' CONVENTION.

[By courtesy of the Kansas Miller and Manufacturer we print the following report of the recent annual Convention of the Kansas State Millers' Association.]

PERSUANT to call the annual meeting of Kansas State Millers' Association convened at Newton, Kansas, July 10th.

The meeting was called to order by Vice President C. H. Searing of Arkansas City. The minutes of the last semi-annual meeting were read and approved. The report of the executive meeting was read by the secretary as follows:

The executive committee met at the Fifth Avenue Hotel, Topeka, Kansas, March 14th, to consider the question of the five cents differential charged by the Transportation Companies to Texas points. Frank Hill, a prominent miller from Carthage, Mo., addressed the committee and explained the efforts being made by the St. Louis and Missouri millers in the matter and after a general exchange of opinion, Geo. H. Hunter offered the following resolution:

WHEREAS, The St. Louis Millers have taken up the matter of discrimination in favor of Texas millers by railroads and have requested the Kansas millers to assist in defraying the expenses of bringing the test case before the Inter-State Commerce Commission;

Therefore, Resolved, That the secretary of the Kansas Millers Association, notify Alex. H. Smith of St. Louis, that Kansas Millers will contribute one-third of the expenses of said test case before the Inter-State Commerce Commission, and further

Resolved, That the secretary be and is hereby instructed to prepare a circular letter to the millers of Kansas, asking them to contribute at the rate of five dollars for each mill of 100 barrels and under, and ten dollars for all mills of 200 barrels, and over 100 barrels, and fifteen dollars for all mills above 200 barrels capacity.

These contributions can be made either by 30 days note or check payable to C. B. Hoffman, Sec'y executive committee. The report was received and adopted.

The report of the finance committee showed a deficit which seemed to cause a deep sigh from the entire convention.

Chairman Searing introduced Mr. Frank Barry, secretary of the National Association who addressed the convention on the work accomplished by the National Millers' Association and extended an invitation to all those present to join the National; and quite a number accepted the invitation.

On motion, the following resolution was adopted.

Resolved, That the Kansas Millers State Association hereby allies itself to the Millers National Association, endorses that organization, and recommends that all members shall take membership in that organization.

A number of newspaper clippings were read charging the Atchison, Topeka & Santa Fe R. R. Co. with giving special rates on grain to Peavy & Co.

After a general discussion the matter was passed, without any action, as it was discovered that Peavy & Co. would pay more for corn on the U. P. track, were all four of the great systems have side tracks.

After a general discussion it was agreed that there was a large sized "African" somewhere.

The election of officers resulted as follows: B. Warkentin, President, Newton, Kansas. C. R. Underwood, First Vice President, Salina; C. H. Searing, Second Vice President, Arkansas City; W. T. Hopkins, Secretary, Enterprise; Geo. H. Hunter, Treasurer, Wellington.

On motion, of H. Oliver, the officers-elect shall constitute the executive committee for the ensuing year.

On motion, C. B. Hoffman, H. Imboden and Geo. H. Hunter were appointed a committee on resolutions.

On motion, the secretary was instructed to

make an assessment of \$3.00 per unit of 100 barrels capacity.

Adopted.

On motion, it was decided to hold the semi-annual meeting at McPherson, Kansas, on the second Tuesday in January next.

Mr. B. Warkentin offered the following resolution.

Resolved, That the Kansas Millers Association in convention assembled most cordially endorse the Butterworth bill for the prevention of gambling in wheat and other farm products.

Adopted.

C. R. Underwood was elected member of the board of directors of the National Association.

The committee on resolution reported as follows:

WHEREAS, The Kauffman Milling Company of St. Louis, Mo., have filed a complaint before the Inter-State Commerce Commission charging gross and unjust discrimination in rates between wheat and flour to Texas points, by the transportation companies, and

WHEREAS, The said railroad companies frequently grant a special rate on wheat and corn for short periods of time, allowing the wheat and corn to be taken from the milling districts in Kansas without the benefit to the producer or consumer, but result in the destruction of the milling interests of this state.

Therefore, be it Resolved, That we, the Kansas State Millers' Association, in convention assembled, demand that the Inter-State Commerce Commission establish rates the same on wheat and the products of wheat and a similar rate on corn and the products of corn, and that said rates be made permanent and continuous, as the frequent changing of rates and granting special rates for such short periods of time, results in demoralizing trade and prices of food products.

There being no further business, the convention adjourned *sine die*.

We are informed that The J. B. Allfree Co., of Indianapolis, Ind., are just getting out a new improved corn and feed mill, size 7x18, with three pairs of rolls, each pair above the other, to be entirely belt drive. This is a feature that will be appreciated by the miller as it will do away with the detestable noisy gears, some of the machines in the market making such a noise that you cannot hear yourself talk without getting forty or fifty feet away from the machine. The machine will be clean and perfectly tight, and will be sold at a very reasonable price. The machine, we understand, has been thoroughly tested and cuts of same will appear in this paper as soon as they can be procured. We also understand that the above named firm are getting up a new wheat roller mill that will compete in price and workmanship with anything in the market. It will have a new improved tightener by which the main belt can be taken up without interfering in any way with the differential. This is an improvement that will be appreciated by millers as they can use their tightener with one operation and not have to let out the differential side.

RECENT PUBLICATIONS.

MINING AND MANUFACTURING AT BESSEMER, ALA.—This is a neat publication issued by the citizens of Bessemer, setting forth their strong points as a mining and manufacturing centre. It contains a great amount of suitable information for the public concerning Alabama interests in general.

PRIZE ESSAY ON Practical Sanitary and Economic Cooking, adapted to persons of small means, by Mrs. Mary Hinman Abel. Published by American Health Association, Dr. Irving A. Watson, Sec'y, Concord, N. H. This is a thoroughly practical work on the subject named, and is worthy of study by all families.

THE CENTURY MAGAZINE for July contains much of interest for various readers, though for the "heated term" some of its articles are rather ponderous in calibre. Edward Atkinson and Henry George, for instance, discuss "The Single Tax" question. Other writers contribute: "A Yankee in Andersonville," the beginning of a remarkable series of papers by captured soldiers, descriptive of their prison experiences, illustrated from sketches and photographs made at the time. "A Provençal Pilgrimage," a tour in the South of France, described by Harriet W. Preston, with illustrations by Joseph Pennel. "The Patriot of 1876," an authentic account of Bacon's Rebellion, by Dr. Edward Eggleston, based upon unpublished manuscripts, illustrated by drawings and reproductions of old prints. "Little Venice, a Story of St. Clair Flats," a complete novelette, by Grace D. Litchfield. "The Anglo Maniacs," a continuation of the anonymous novel began in the

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At Groton, South Dakota, in the hard wheat region, on the Hastings & Dakota Division of the C., M. & St. P. R'y, 20 miles east of Aberdeen. Steam power elevator, 20x30, and annex, 30x40, cribbed and bolted, with scales and all necessary appurtenances complete. Storage capacity 30,000 bushels. Purchases of wheat the past six years have averaged 80,000 bushels per annum. Will be sold for \$3,500 to close up an estate. Original cost \$5,960. Apply to

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All the fixtures and machinery for a first-class 200 barrel ROLLER MILL and Feed Mill. Will sell complete outfit CHEAP. Correspond with or apply to

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All the fixtures and machinery for a first-class flour and feed mill. Good location. Correspond with or apply to the

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June number. "The Reign of Reason," a short story, by Viola Roseboro. Also the following: "The Women of the French Salons" (eighteenth century) with portraits of noted leaders; "Rip Van Winkle in London," in Joseph Jefferson's Autobiography; "A Taste of Kentucky Blue-grass," illustrated; "Italian Old Masters," with frontispiece engraving by Timothy Cole; "Friend to Olivia," part ix; poems, departments, etc. New York: The Century Co.

MILLING AND MECHANICAL NOTES.

MINERAL OR SLAG WOOL.—The use of mineral or slag wool is becoming very general as a filling for floors. It is also a protection against the spread of fire. The experiments conducted by H. H. Stanger, C. E., London, England, prove that a body of the slag or wool, say one inch thick, does not become incandescent when subjected to intense heat, only the parts in immediate contact with the flame being fused, leaving the rest intact; and even when heated through by long subjection to heat there was no radiation, a thermometer held within one-fourth of an inch not varying in the least. The Liverpool theatres have the drop-curtains lined with this material, and recently a patent has been obtained for weaving the slag wool into curtains for both theatres and other buildings.

SKILLFUL FIREMEN.—The duty of a fireman in an engine room is something to which too little attention is given. More money can be saved by an intelligent and thoroughly competent fireman

than by any other workman in a large establishment. The following paragraph is one which may well be carefully considered in this connection: The *Industrial World* says that a large manufacturing firm, the name of which, however, it does not mention, has made a new departure with a view of securing greater economy in the consumption of coal. It has concluded to deal with the firemen instead of devices to secure economy, because no matter how ingenious the latter, they will not avail if the firemen use the coal carelessly. The firm is therefore training their firemen to use fuel to the most advantage. The men who save the most fuel are to be rewarded, and those who do not prove expert are to be replaced by others.

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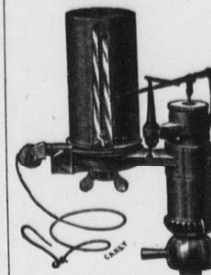
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RECENT PATENTS.

The following is a list of patents relating to Milling and Grain-handling appliances granted during the month of May and June, as specially reported for the U. S. MILLER, by Chas. E. Brock, Patent Attorney, Pacific Building, Washington, D. C.:

No. 427,055, Sifting Shovel, M. J. Cushing, New York, N. Y.

No. 427,159, Process of making hominy flakes, J. A. Currie, Springfield, Ohio.

No. 427,169, Drier, San Frisco, Cal., assignor to Mosher, Shaw & Craig, San Jose.

No. 427,277, Bolting Reel, R. A. Stubbs, Greenville, Ohio. This machine covers in combination, the casing having inclined hopper sides, a reel mounted to turn in said casing, transversely extending dividing boards through which passes the said reel, a series of gates held beneath the dividing boards and adapted to actuate the same, conveyers located below the gates at each side, and a lined bearing formed on the top of the partition of the said conveyers and fitted against the underside of the gates.

No. 427,855, Wheat scouter, H. J. Livengood, Bradford, Ontario, Can.

No. 427,644, Hominy mill, J. Warrington, Indianapolis, Ind., assignor of one-half to the Nordyke & Marmion Co., same place.

No. 427,750, Machine for sewing filled bags, T. J. Daniels, S. Frisco, Cal., assignor to Sperry & Co., same place.

No. 427,774, Cleaner attachment for bone flour sifters, A. Lister, Newark, N. J.

No. 427,830, Dumping bucket for conveyors, A. E. Brown, Cleveland, Ohio.

No. 427,925, Cotton seed delinter, R. F. Spangenberg, New Orleans, La.

No. 428,067, Dust collector ventilator, J. T. Briggs, Decatur, Ill.

No. 428,200, Clover huller, D. Whitting, Ashland, Ohio.

No. 428,424, Dust collector for threshers, G. E. Sterling, S. T. Sterling, Camden, Ind.

No. 428,674, Middlings purifier, W. D. Gray, Milwaukee, Wis.

No. 428,709, Means for operating coffee mills, F. Winsell, Philadelphia, Penn.

No. 428,719, Sieve, W. Hahn, Neumuhle, Germany.

No. 428,768, Feed regulator, E. Decollogne, Paris, France.

No. 428,816, Grain weigher, E. O'Brien, Lancaster, Eng., assignor to H. Pooley & Son, same place. This device consists of a hopper, having two openings, one larger than the other, and a receptacle beneath the hopper, and having a tilt bottom so connected with the smaller opening that when the opening is closed the bottom is tilted to discharge the grain.

No. 428,907, Machine for sifting and sorting meal, flour etc., C. Haggemacher, Buda Pesth, Austria.

No. 429,008, Chop graden, " " "

No. 428,909, Sifting mach., " " "

No. 428,958, Pea thrasher and separator, E. Sanford, Milan, Tex.

No. 428,978, Combined drier and digester, P. C. Vogelius, Philadelphia, Penn.

No. 429,018, Dust collector for thresher, W. H. Davis, El Dorado, Ohio.

No. 429,135, Thrasher and separator, A. Kleinstiver, Petrolia, Ont., assignor of one half to B. F. Van Tuyl, same place.

No. 429,146, Crusher roller mill, M. G. Mosher, Wichita, Kan.

No. 429,147, Shaking bolt, M. G. Mosher, Wichita, Kan.

No. 429,339, Bolting reel, J. B. Dobson, Indianapolis, Ind. This apparatus consists of two or more separate bolts or sieves arranged alongside of each other and mounted in the same rotary structure, and separate feed and discharge compartments communicating therewith, through which the material to be treated is received and discharged therefrom.

No. 429,347, Dust collector, L. W. Haskell, Auburn, Me.

No. 429,381, Roller mill and scraper, J. Harvey, Brooklyn, N. Y.

No. 429,529, Grinding mill, F. W. Ihne, Kansas City, Mo., assignor of one half to E. H. Bonton, same place.

No. 429,544, Machine for making cotton-seed meal into cakes, J. S. Price, Houston, Tex.

No. 429,565, Fanning mill, R. K. Floeter, Chatham, Ont., Can.

No. 429,589, Grain meter, G. B. Howland, Pontiac, Mich.

No. 429,616, Grain separator, W. L. Gilson, McMinnville, Ore. This device consists of a series of agitating rollers having spiral flanges coiled oppositely from their central portions and provided at their ends with spiral flanges the ends of which they adjoin.

No. 429,634, Grain-separator, O. M. Morse, Jackson, Mich.

No. 429,645, Flour meal, or bran packer, C. Roshl, Chicago, Ill.

No. 429,679, Attrition mill, H. A. Duc, Jr., Charleston, S. C.

No. 429,680, Roller-mill, " " "

No. 429,749, Grain and seed separator and grader, W. S. Wood, Kalamazoo, Mich.

No. 429,909, Separating-machine, A. Heine and N. B. Trask, said Trask assignor to said Heine, Silver Creek, N. Y.

No. 429,945, Grain scouter and cleaner, D. M. McKinnon, Edwardsville, Ill.

No. 429,998, Flour-bolt, J. M. Case, Columbus, Ohio, assignor to the Case Manufacturing Company, same place.

No. 430,222, Grinding-mill, H. C. Taylor, Homer, La.

No. 430,244, Device for weighing grain, A. I. Anderson, Odell, N. D.

No. 431,289, Cornproduct, B. G. Hudnut, Terre Haute, Ind.

No. 430,290, Flaked corn product, B. G. Hudnut, Terre Haute, Ind.

No. 430,335, Grain-Separator, J. H. Calkins, Owosso, Mich.

No. 430,355, Bag filler and holder, D. G. Stone, Negaunee, Mich.

No. 430,444, Dust-collector, W. D. Smith, Detroit, Mich., assignor to the Huyett & Smith Manufacturing Company, same place.

No. 430,558, Grain-elevator, F. Wynken, New York, N. Y.

No. 430,632, Centrifugal drying-machine, A. F. Dore, Mus, Chicago, Ill.

No. 430,652, Grain steamer and drier for mills, G. L. Jarret Des Moines, Iowa.

No. 430,661, Pepper-grinder, J. C. Levi, Patterson, N. J.

No. 430,761, Bolting-reel, J. Swan, Chicago, Ill.

No. 430,789, Scalping and bolting machine, J. M. Smith, Springfield, assignor of one-half to C. F. Wolfe, New Morefield, Ohio.

No. 430,796, Blower, H. H. Barclay, Buffalo, N. Y.

No. 430,836, Bolting-reel, W. Cook & J. R. Gent, Columbus, Ohio.

No. 430,867, Automatic grain-scale, M. B. Lloyd, Minneapolis, Minn.

No. 430,983, Millstone-dress, G. M. Snodgrass, Honey Grove, Tex.

No. 430,999, Grinding-mill, D. C. Stover, Freeport, Ill., assignor to the Stover Manufacturing Company, same place.

No. 430,921, Alarm for mill elevators, F. Carter & M. McChesney, North Platte, Neb.

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Appleton, Menasha, Neenah	*11:05 P. M. 12:00 A. M. 2:30 P. M.	6:55 P. M. 11:20 A. M.

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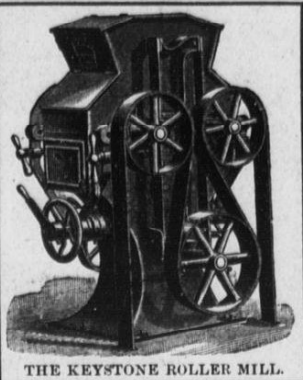
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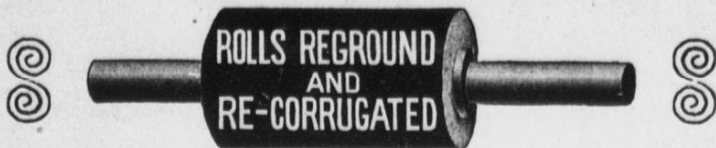


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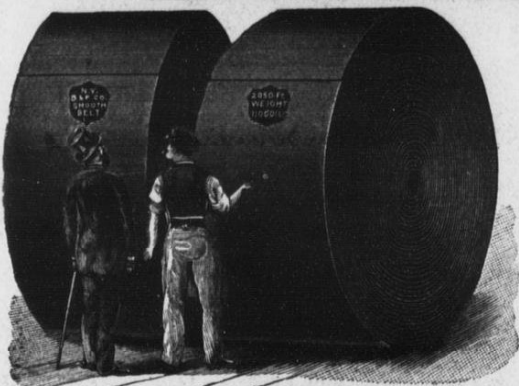
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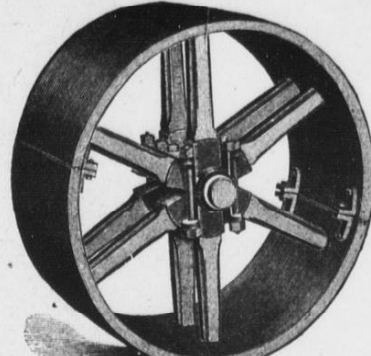


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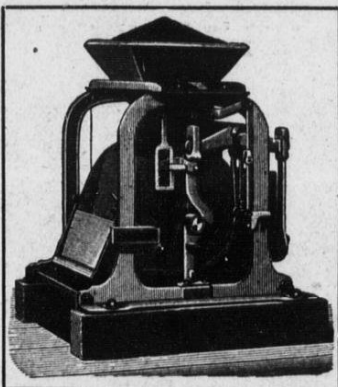
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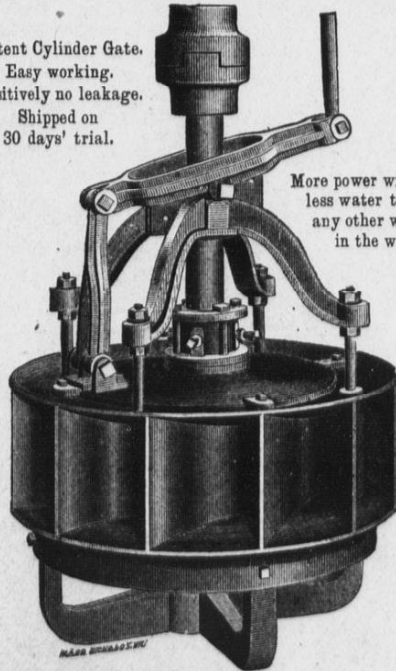
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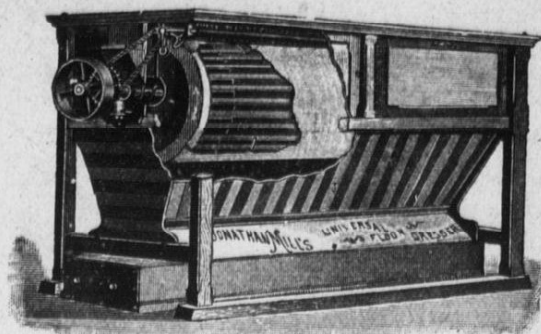
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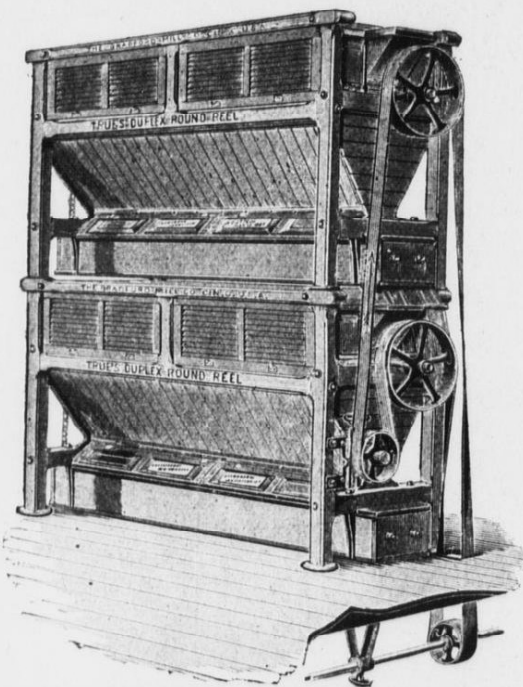
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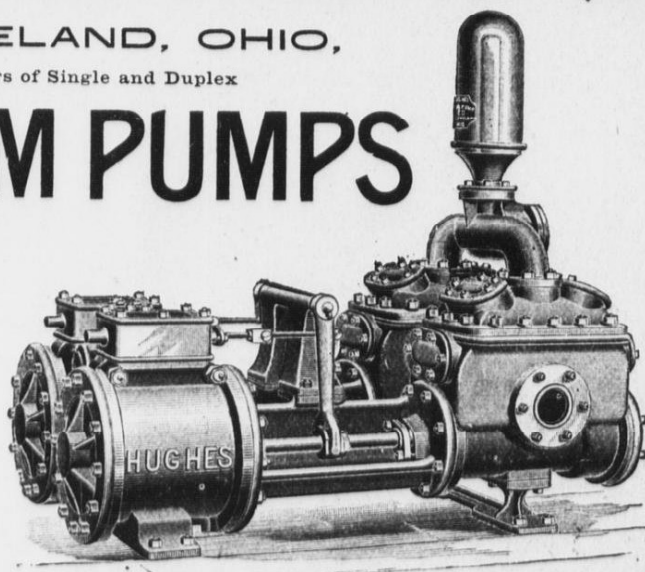
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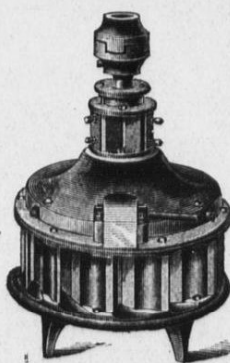
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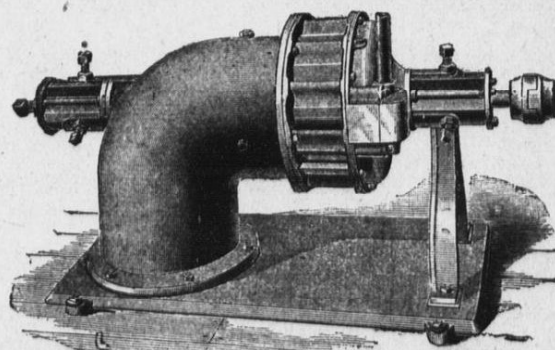
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